Air-Cooled Condensing Machine Room . . . Pg. 16

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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

We Lead Russia In Refrigeration
'Look' Looks at Us
Alibi Almanac for Salesmen
Stories of the Week
Final Ideas

We Lead Russia In Refrigeration

"I saw Soviet Communism as few people are permitted to see it—as a diseased body. After this I could not remain there."

Today, Peter Deriabin (the man quoted) lives alone in a middle-class apartment building somewhere in New England. His life is not ordinary. You see, he sought and found asylum in the U.S.A., but he is still hunted!

He uses an assumed name; has developed a different gait and mannerisms; employs a disguise to confuse anyone who might suspect his true identity; and hides his face from photographers.

One of his comments on life in America:

"A Soviet general would envy my air conditioning."

He isn't kidding, either. In the U.S.S.R., as in most places around the world, American refrigeration and air conditioning progress is followed, but rarely emulated.

Case in point: Khrushchev recently invited 98 American executives to study "management methods in any Russian industry"—in trade for 98 Russians "to study refrigeration in the U.S.A."

'Look' Looks at Us

On a different plane *Look* magazine issues the challenging statement: *"The Russians are trying to turn our best weapon against us."*

"What is that weapon? It is mass production by big integrated industries—fast, efficient, economical. This is our greatest asset in a Cold War which has become an economic struggle. It is the source of our strength and the basis of our position as a world power.

"Other countries, especially the Russians, are imitating our great integrated industries. For our big corporations, they substitute gigantic trusts and combines."

(Concluded on Page 8, Col. 1)

Here's How to Build Residential Air Conditioning Sales — SERVICE!

(Conscience of the Industry Editorial by George F. Taubeneck)

NO FUTURE is in sight for residential air conditioning unless those who sell it quit trying to "play it cute." Consumer deception went out the window with rigged TV quiz shows.

False advertising, "footballing," and a hundred other shoddy practices still are giving the residential "total comfort" business a bad name, even so.

Advice to contractor-dealers: Allow a reasonably safe profit margin for yourself—but make the price firm. Don't haggle or dissemble in an attempt to be destructively competitive lest you lose the sale altogether.

By "destructively competitive" we mean cheating on specifications or ratings, hedging on quotations, fooling the

(Concluded on page 12)

Typhoon Revises Warranty Policy

BROOKLYN — Typhoon Air Conditioning Div. of Hupp Corp. has revised its warranty policy, "to eliminate, or at least minimize, the problems involved in the equable application of the policy," according to Henry A. Porzio, service manager.

Warranties issued on units shipped after Jan. 1, 1960 will cover repair or replacement of all defective parts during the first year after installation, but no longer than 18 months after shipment.

The warranty covers compressors only in the second through fifth years. There is no labor or freight allowance in the warranty.

The extended compressor warranty is mandatory on all Typhoon units with ratings up to

(Concluded on Back Page, Col. 5)

Mass. Adopts 0° Frozen Food Code

BOSTON — A "zero-degree" frozen food handling code has been adopted by Massachusetts, with enforcement to start Aug. 1.

This action makes the state the first in the U. S. with such a code. It was taken as Connecticut officials prepared to hold hearings soon on a similar code for that state.

The Massachusetts regulations are patterned after the controversial code adopted last year by the Association of Food & Drug Officials of the U. S. (AFDOUS).

The latter code is a suggested set of regulations for use as a guide by states desiring to establish controls. It specifies that 0° F. is the maximum temperature to which frozen foods should be subjected during

(Concluded on Page 4, Col. 5)

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12th Exposition of Industry Will Be In Los Angeles Feb. 12-15, 1962

WASHINGTON, D. C. — The 12th Exposition of the Air Conditioning and Refrigeration Industry will be held in Los Angeles, Feb. 12 through 15, 1962, it has been announced by the Air-Conditioning & Refrigeration Institute, sponsors of the show.

In making the announcement, H. F. Spoehrer, executive vice president, Sporlan Valve Co., chairman of the ARI Show Committee, said:

"Our decision to move the 1962 show to the West Coast is recognition of the tremendous population and industrial growth of the West Coast, its increasing importance as a major market, and a desire to make it possible for many people to attend who have been unable to go to Chicago or to an Eastern Show.

Moving the dates to the early part of the year will better serve the purpose of introducing new models and will take the show out of competition with other major shows in the same calendar year."

The 13th Exposition of the Industry has been scheduled for Chicago in February, 1964 with the following show to be held in the Southwest or possibly in the East in February, 1966.

Fuel Oil Groups Act In N. Y. Fraud

NEW YORK CITY—As investigations into an alleged fuel-oil delivery racket continued in this area, representatives of four fuel oil industry organizations, at a meeting last week in City Hall, agreed to set up a committee to work with city officials on a plan for protecting users against short-measuring.

The fuel oil industry, which requested the meeting, reportedly hopes to avoid legislation that would require dealers to have licenses. Some homeowners allegedly have been charged for air pumped along with oil into their storage tanks.

Shortly after the fraud came to light, a bill was introduced in City Council to impose special licensing regulations and penalties on fuel oil dealers. Among other things, it would

(Concluded on Back Page, Col. 1)

Carrier Offers High-Speed Hermetic

SYRACUSE, N. Y.—A 3,500 r.p.m. welded hermetic compressor approximately half the size and weight of its previous models has been developed by Carrier Corp.

Called the "Micromite," the new compressor will appear in two room air conditioners in March and in central air conditioning units with capacities up to 4 tons for residential and commercial use soon afterward, according to Russell Gray, vice president of Carrier and general

(Concluded on Page 18, Col. 2)

5 Groups Formed In Crane Move

Major Decentralization Integrates Acquisitions

CHICAGO — Crane Co. has announced a major decentralization of its rapidly-growing manufacturing facilities and marketing organization.

The program will integrate five recently-purchased companies, including National-U. S. Radiator Corp., into Crane.

Wesley A. Songer, president, said the company has been formed into five groups, each with its own manufacturing, engineering, sales, and control divisions. The groups will operate much as independent companies, it was indicated. They are:

Plumbing-Heating-Air Conditioning Group, Johnstown, Pa.

Industrial Products Group, Chicago.

Crane Supply Co., Chicago.

Systems and Controls Group, headquarters yet to be named.

International Group, New York City, an entirely new function.

The new arrangement unites Crane Co. with the firms that Crane has purchased since last September, Songer said. In addition to National-U. S. Radiator, the firms are:

The Chapman Valve Mfg. Co., Springfield, Mass.; Pipe Fabricators, Inc., East Chicago, Ind.; and The Swartwout Co., Cleveland. A fifth acquisition, Canadian-Pittsburgh Piping, Ltd., has become part of Crane, Ltd., Canada, a wholly-owned subsidiary of Crane.

Songer said the decentraliza-

(Concluded on Page 4, Col. 1)

RACCA Convention Set for Miami Nov. 20-23

DALLAS—Annual convention of the Refrigeration & Air Conditioning Contractors Association (RACCA national) will be held Nov. 20-23 at the Fontainebleau hotel, Miami, Fla., it was announced here last week following a meeting of the RACCA board of directors.

Convention theme and details of the program will be announced later. Dudley Cawthon will be convention chairman, and R. S. Lafferty will be assistant chairman. Both are affiliated with Air Conditioning & Refrigeration Association of Miami, which will be the host group for the convention.

AGA's Gas Heating Task Force Endorses Silver Shield, To Seek Utility Support

NEW YORK CITY — G. J. Tankersley, president of Western Kentucky Gas Co. and chairman of the American Gas Association's Gas Heating Task Force, reports that his group has endorsed the Silver Shield program of the National Warm Air Heating & Air Conditioning Association and will help promote gas utility participation.

AGA's Promotion Bureau will prepare special gas heating newsletters for distribution to utility company residential sales departments. The newsletters will feature case histories of successful gas company Silver Shield promotions.

The bureau also will distribute Silver Shield promotional material produced by the NWAHACA.

The heating industry's Silver Shield program is aimed at creating greater demand for completely installed forced air heating and cooling systems, guaranteed as to comfort and performance and identified by the Silver Shield emblem, it was pointed out.

In announcing AGA support of the program, Tankersley noted that the gas industry's house heating business has nearly tripled in the past 10 years. An estimated 20.4 million of the industry's 30 million residential customers currently heat their homes with gas, using nearly 20 billion therms per year, it was stated.

The gas industry also expects to add new house heating customers at the rate of more than a million per year during the sixties, Tankersley said.

He pointed to AGA forecasts indicating that the number of heating customers would climb to about 28 million by 1965 and to more than 34 million by 1970. The volume of gas used annually for house heating is expected to double in the sixties, reaching 40 billion therms a year by 1970.

Southeastern ARW Elects Officers

TAMPA, Fla. — Members of the Southeastern Div., Air-Conditioning & Refrigeration Wholesalers association, held its first meeting here and elected F. L. Graves of Tampa chairman.

H. E. Baker, Savannah, was named vice chairman and J. E. McGraw, Jacksonville, was chosen secretary-treasurer.

JIPC OK's Temporary Heating-Cooling Specification for Submission to AIA

WASHINGTON, D. C.—Highlight of a recent meeting here of the Joint Industry Program Committee was approval for submission to the American Institute of Architects of a new specification for the temporary heating and cooling of buildings under construction.

The specification defines temporary heating and cooling and analyzes the duties of the general contractor and the mechanical contractor, as well as the obligations of the owner, according to a report by the National Association of Plumbing Contractors.

NAPC said the specification "carefully charts the proper responsibility of both mechanical contractor and general contractor for the operation and expense of installing and operating a temporary heating and cooling system.

The latter part of the specification, dealing with wiring for temporary heating and cooling, is subject to further discussion and alteration by the appropriate AIA committee, it was pointed out.

The present specification was developed by a subcommittee of JIPC, headed by Eugene Bradshaw, of the United Association, and on which Irvin L. Rechkemmer, NAPC president; Harvey Hottel of the Refrigeration & Air Conditioning Contractors Association, and James M. Anderson, Jr. of the Mechanical Contractors Association of America.

* * *

Text of Specification

SPECIAL CONDITIONS

() TEMPORARY HEATING AND COOLING

1. **Temporary Heating** means maintaining the temperature of materials or portions of building at a level above the minimum required to permit their satisfactory installation and conditioning.

2. **Temporary Cooling** means maintaining the temperature and relative humidity of materials or portions of building at a level below the maximum allowable for their satisfactory installation and conditioning.

3. **General Contractor:** Provide temporary heat by approved means until building is enclosed (roof completed, exterior openings closed by permanent windows and doors or approved temporary closures). Include necessary labor, equipment, fuel, water and electrical energy.

(a) After building is enclosed, furnish fuel, water and electrical energy for operation of temporary system for period specified below in Par. 4(b), as adjusted by Par. 4(c).

(b) Direct Mechanical Contractor when temporary heat or cooling is needed.

4. **Mechanical Contractor:** Provide temporary heat after building is enclosed, as follows:

(a) **Provide system** of temporary heating, using steam, hot water, air, or other heat generating plants and installing ..... heating units totaling approximately ..... B.t.u. in approved temporary or permanent locations. Equipment approved for permanent installation may be used for temporary heating, provided that any components so used shall be left clean with worn or damaged parts and non-permanent filters renewed; and provided that such use shall not shorten guarantee period.

(b) **Operate system** when needed or directed, a total of ..... hours, with supervisory, labor and operating personnel as required by agencies having jurisdiction and by job conditions, and maintain accurate record of days or shifts system is operated.

(c) **Adjustments:** Should temporary heat requirements be more or less than specified above, obtain an order and adjust the Contract Price as provided at Art. 15 of the Standard AIA General Conditions.

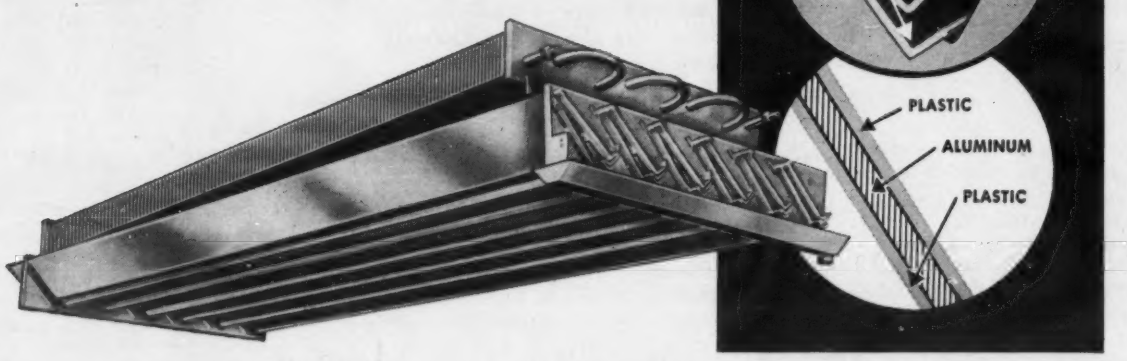
(d) **Temporary Cooling:** When temporary operation of the air conditioning system is required for cooling and/or dehumidifying, all applicable provisions as outlined above for temporary heating shall prevail. Operate system a total of ..... hours as specified in paragraph (b).

*(e) **Wiring:** Provide all wiring required for operation of temporary systems beyond disconnect switch left for connection to power service by Electrical Contractor as specified under Temporary Light and Power.

*(NOTE: **Item 4-e to be discussed further.**)

NEW KRAMER

COIL and BAFFLES



with attractive lifetime
PLASTIC CLAD ALUMINUM
at no extra cost!

Permanently Attractive Baffle—Constructed of a new plastic-clad aluminum which combines the strength and flexibility of aluminum with corrosion-resistant plastic for lifetime beauty. It will not chip, peel, corrode, sag, fade nor get brittle. It is absolutely odorless and sanitary. The coil with its colorful baffle will retain its attractive appearance for the life of the cooler.

Dripless Triple-Trough Design—The triple-trough—a unique Kramer feature—provides a deeper primary trough for unrestricted draftless circulation of cool air. The narrow third trough reduces dripping to a minimum, making the Kramer triple-trough baffle virtually drip-proof.

Easy to Install—Kramer coil and baffle combinations are completely assembled at the factory. Shipped in closed wooden cases, they arrive on the job clean and ready for installation, saving assembly and installation time.

Immediate Shipment—A complete range of 15 carefully selected sizes giving maximum Btu per dollar for every application are carried in stock for immediate shipment. Both left-hand and right-hand baffles are available.

WRITE FOR BULLETIN CBC-276C

KRAMER TRENTON CO. • Trenton 5, N.J.

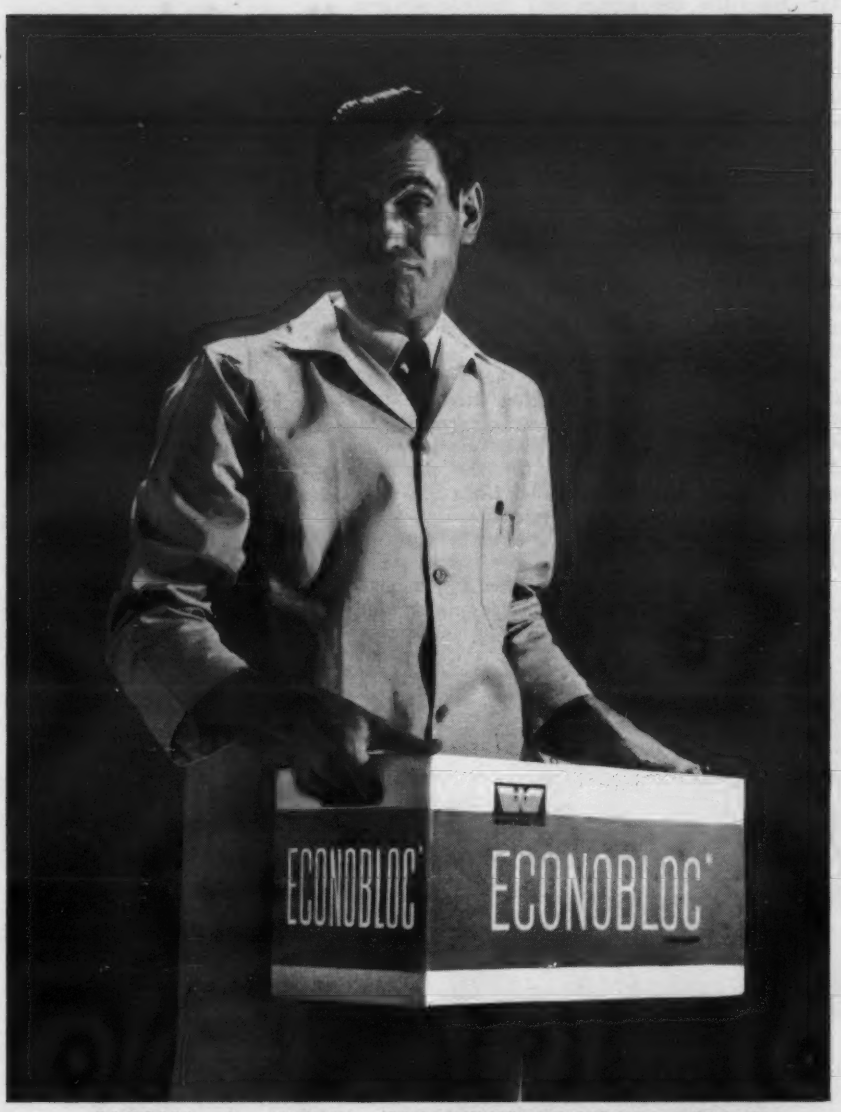
44 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

Thinking of—

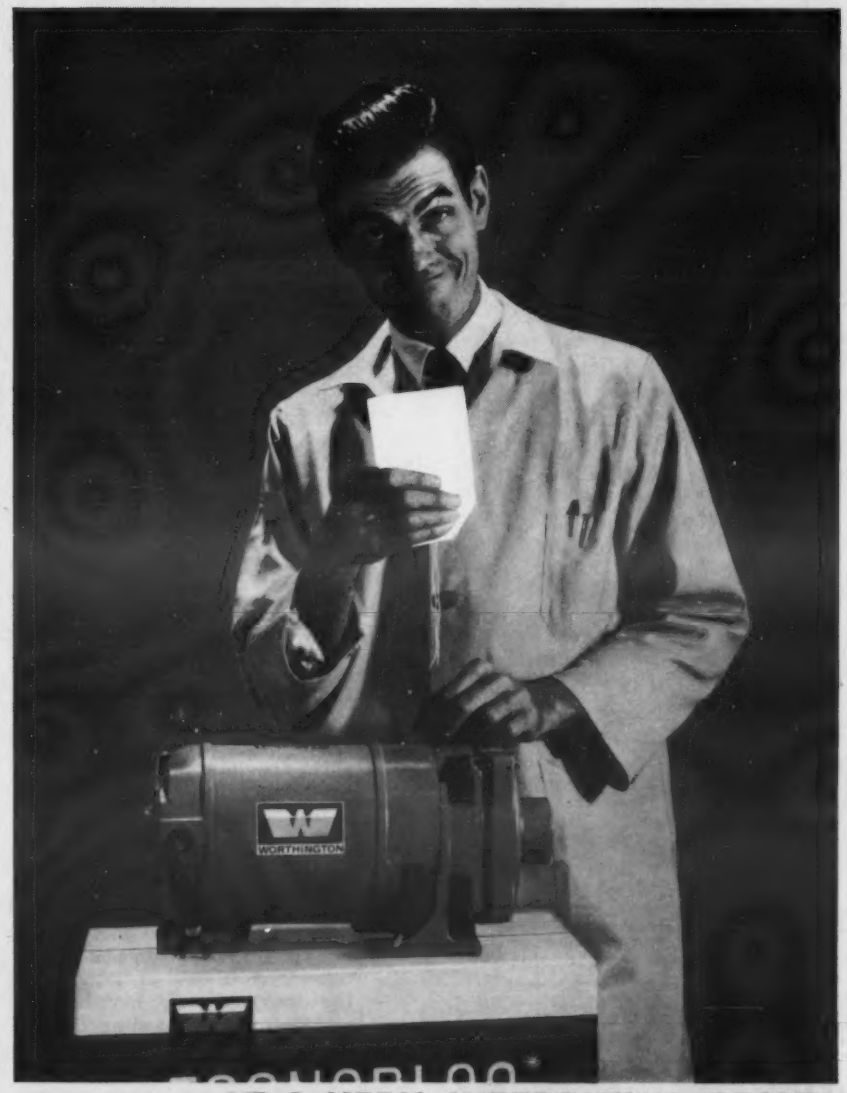
- **changing territories**
- **expanding your territory**
- **taking on new lines—**

Check the
CLASSIFIED ADS

Your opportunity may be there.



NOW! A NEW WORTHINGTON PUMP... WITH WORTHINGTON QUALITY...



AT A VERY INTERESTING PRICE!

THE NEW ECONOBLOC PUMP has been designed by Worthington to do just one thing: to give you a more economical installation.

The Econobloc pump gives you Worthington quality throughout . . . at a competitive price. You save money, too, because this new pump is carried in stock in 7 Worthington warehouses across the country (Roselle Park, N. J., Atlanta, Cleveland, St. Louis, Chicago, Houston and Los Angeles).

All prices are F.O.B. warehouse.

The Econobloc's packaging is a real time saver. The package is attractive, light weight and easy to handle.

After the pump is installed you can count on years of trouble-free life in the best Worthington tradition. In the rare event that trouble occurs, warranty service is provided from each regional warehouse.

The new Econobloc pump is stocked in 6 sizes in the fractional horsepower range that delivers up to 110 gallons per minute and 115 feet in head. Additional sizes go up to 7½ horsepower. For more information write to Worthington Corporation, Section 20-11, Harrison, New Jersey.

WORTHINGTON

Crane Forms Five Groups--

(Concluded from Page 1, Col. 5)

tion will result in more rapid service to wholesale distributors and industrial customers.

T. B. Focke, former president of National-U. S. Radiator, will head the Plumbing-Heating-Air Conditioning Group. Its nine manufacturing plants consist of the two Crane potteries at Trenton, N. J., and Colton, Calif., and seven National-U. S. Radiator facilities:

Viking Air Products, Cleveland, light steel fabrication; Duncansville, Pa., residential heating and radiation; Geneva, N. Y., boilers and cast iron radiation; Greenville, Ill., residential and commercial air conditioning; Drayer-Hanson, Los Angeles, fin tubing, heat exchangers, refrigeration, and air conditioning; Marine Products, Middletown, Pa., residential and low pressure steel boilers and marine cargo handling equipment; New Castle, Pa., cast iron residential and commercial boilers and heat exchangers.

R. W. Lindsay has been named the group's director of marketing; L. N. Hunter, director of engineering; and L. L. Hotsenpiller will head manufacturing.

Songer said the Industrial Group will be headed by Charles H. Lovelace, Crane marketing executive. He will make his headquarters at Crane Co.'s Chicago Works, 4100 S. Kedzie Ave.

The group's manufacturing plants are three Crane Co. factories at Chicago, Chattanooga, Tenn., and East Chicago, Ind., The Chapman Valve Mfg. plant at Springfield, Mass., and two National-U. S. Radiator factories, Powdered Metals, Johnstown, Pa., and Cyclotherm, Oswego, N. Y.

The Industrial Group will have responsibility for the manufacture, engineering, and sale of valves, fittings, fabricated piping, steam generators, and powdered metals.

W. D. LaRue will head the group's marketing department; J. P. Magos will direct engineering, and Walter Kovalick will be in charge of manufacturing.

The Crane Supply Co., Songer said, is the company's nationwide network of 53 sales branches and warehouses. H. R. Riggs, former manager of the Crane branch at Pittsburgh, has been named general manager.

The fourth division—Systems and Controls Group—is expected to play an important part in advancing Crane Co.'s entrance into the fields of automation and automatic valving. It is made up of Crane's Hydro-Aire factory at Burbank, Calif. and The Swartwout Co.

The International Group is an entirely new function in Crane Co., Songer noted, adding that the group will include several newly-created or acquired companies. They are:

Crane International, Nassau, B.W.I.; Chapman International, Inc., Nassau; Crane Co. of Panama, Nassau; Crane S. A., Geneva, Switzerland; Export Dept., New York City; N. A. F., Deventer, Holland.

The Nassau-based operations are trading companies which will be responsible for the worldwide distribution of the products of Crane Co. and its subsidiaries. P. L. Yates, Crane financial executive, has been appointed managing director.

Crane S. A., according to Songer, is a newly-created holding company for the management of Crane Co.'s growing European interests.

N. A. F., Deventer is a manufacturing firm with foundry and machining facilities. It produces components for the piping and processing control industries, Songer said.

Mass. Code--

(Concluded from Page 1, Col. 2)

transportation, storage, and retailing.

Although some members of the Massachusetts frozen food industry indicated they thought the state code raises some tough problems, it appeared that all segments of the industry will try to comply with the regulations in the six months before enforcement begins.

In one of its eight sections, the code requires that in backroom facilities, display cases, and all other handling procedures at the retail level, refrigeration facilities be capable of holding an air temperature of 0° F. or lower.

With reference to retail backroom storage facilities, the code says that "when cabinet-type facilities are employed, they shall be defrosted as frequently as necessary to maintain refrigeration efficiency; they shall be equipped with an accurate thermometer indicating a representative air temperature."

Walk-In Freezers

It also says that when walk-in freezers are used by retailers for backroom storage, frozen foods shall be stored so as to permit free circulation of refrigerated air; they shall be equipped with an accurate thermometer, the sensing element of which shall be located within the upper third of the distance between floor and ceiling and the sensing element shall not be placed in a direct blast of air from the cooling unit, cooling coils, and heat exchange devices or near the entrance door; and they shall be equipped with an automatic mechanism for defrosting refrigerated coils when forced air blower type of refrigeration is employed.

Display Cases

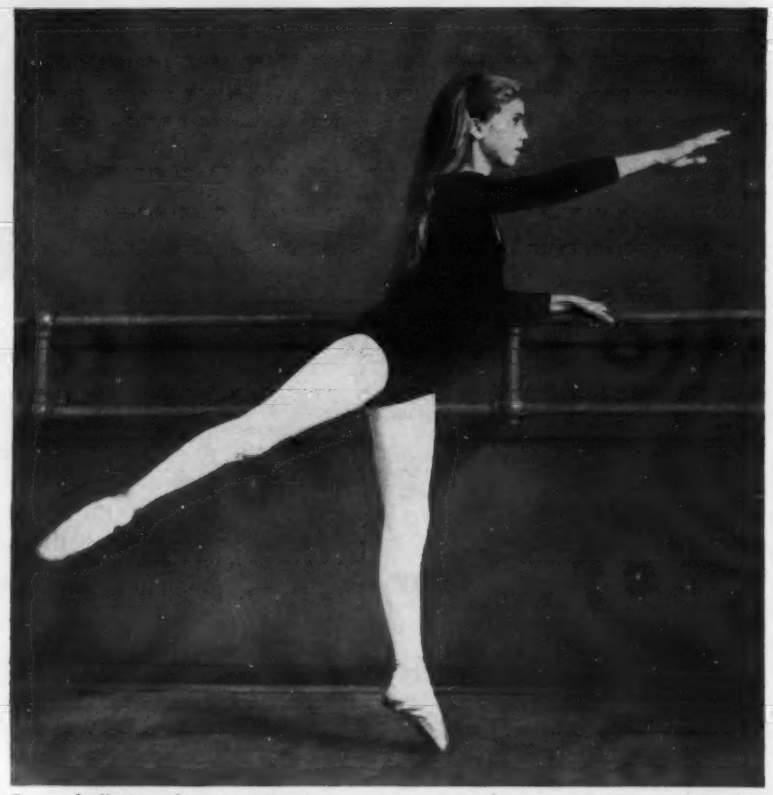
Regarding display cases, the code specifies that they shall be equipped with an accurate thermometer whose sensing element shall be located in an appropriate place within the path of refrigerated air being returned to the coils; and that the product load line shall be the highest point of discharge and return of refrigerated air and the load line shall be designated by the case manufacturer on the case.

Another specification says that "all frozen foods in backroom storage facilities or in display cases shall be held at an air temperature of 0° F. or lower, except for defrost cycles and intervals, or for other conditions beyond the immediate control of management of the retail outlet."

Distributors are prohibited from accepting frozen foods when the internal product temperature is more than 10° F.

However, the operator may accept custody of such lots on request of the owner of the lot, "provided said foods are detained from sale and the temperature of such product is promptly returned to and maintained at 0° F. or lower for the purpose of maintaining residual quality pending chemical, bacteriological and organoleptic examination to determine whether or not a loss in quality, condition, and grade has occured."

In dance studios and delicatessens, nightclubs and nurseries... **You'll find**



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SUPER-DRY REFRIGERANTS

approved! accepted! preferred!

Wherever you go, you'll find "Genetron" super-dry refrigerants universally accepted for use as original or replacement charge in modern refrigeration and air-conditioning equipment. "Genetrons" offer unexcelled purity and dryness . . . and their strict quality specifications are consistently *bettered* in production. Leading equipment manufacturers, refrigeration engineers and air-conditioning and refrigeration wholesalers approve, specify and recommend them. They know they can always count on "Genetron" refrigerants for dependable, trouble-free performance.

"Genetron" super-dry refrigerants are available from wholesalers everywhere, coast to coast. See your wholesaler. Insist on "Genetron"!

genetron 11 ORANGE LABEL CCl_3F
TRICHLOROMONOFLUOROMETHANE

genetron 12 WHITE LABEL CCl_2F_2
DICHLORODIFLUOROMETHANE

genetron 22 GREEN LABEL $CHClF_2$
MONOCHLORODIFLUOROMETHANE

genetron 113 PURPLE LABEL $C_2Cl_3F_3$
TRICHLOROTRIFLUOROETHANE

genetron 114a BLUE LABEL $C_2Cl_2F_4$
DICHLOROTETRAFLUOROETHANE

Dance, ballerina, dance—under the expert eye of the dance master. Air-conditioning in the studio helps this little ballet dancer enjoy her hours of practice and perform better, even in the heat of summer . . . keeps the air fresh and pure year 'round.

The cold cuts stay tasty and the dairy products sweet and farm fresh, thanks to refrigerated display counters and modern freezer lockers at the corner delicatessen. Smart proprietors please their customers even more with whole-store air-conditioning.

Plenty of atmosphere pervades this swank nightspot—and it isn't smoke-filled! Air-conditioning gently circulates the air and provides a gentle stimulus, too, for increased business during the summer.

Sound asleep—and chances are he'll stay that way all night long, with a window air-conditioner in the nursery. Air-conditioning keeps the temperature at a comfortable level, eliminates drafts and stuffiness.

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.

Allied Chemical

Copeland Realigns Field Sales Responsibilities

Dale H. Bodine

D. R. Macklem

A. S. Garven

Dennis J. Miller

SIDNEY, Ohio—A major reassignment of field sales responsibilities and the addition of three new regional managers were announced by Copeland Refrigeration Vice President Rudy Berg.

E. L. Johnson

"The volume and number of manufacturers of air conditioning and refrigeration products have made it necessary to realign our present field sales responsibilities not only to meet present needs but also to prepare for future expansion along the lines of industry growth," he stated.

In the new arrangement, the country has been divided into 11 sales regions, each under a separate regional manager. Provision has been made—by virtue of geographical coverage or sales volume — for associate managers within regions.

Several transfers among present Copeland personnel have been completed. Dale H. Bodine, formerly manager of educational services, has been appointed manager of the Ohio, Kentucky, central and south Indiana, western West Virginia, and western Pennsylvania region.

Donald R. Macklem, formerly headquartered in Chicago, will manage the Texas, Oklahoma, western Louisiana region.

Among the new regional managers joining Copeland are: A. S. Garven, in charge of sales in the New England States, northern New Jersey, and metropolitan New York City; Dennis J. Miller, Nebraska, Iowa, southern Wisconsin, northern Illinois, and northwestern Indiana; and Associate Manager E. L. Johnson, who with Regional Manager F. E. Jernberg will be in charge of sales in the Pacific Northwest, and northern midwest states.

Present regional managers who will continue to represent Copeland are: John L. Zant, Pacific Coast region, west Texas, and Hawaii; John Young, Kansas, Missouri, Arkansas, and southern Illinois; A. E. Cadwell, Michigan and northern Indiana; Harold S. King, central southern states region; and Bert Kaple, southeastern states region.

"This re-deployment and strengthening of our field sales staff will enable Copeland to better serve our customers, especially in the constantly growing area of applications," Berg concluded.

Robinson Stockholders Approve Acquisition Of Kensico Tube

NEW YORK CITY—At a special meeting, stockholders of Robinson Technical Products, Inc. approved the acquisition of Kensico Tube Co., Inc., manufacturer of seamless copper tubing. Robinson makes metal mountings to protect aircraft and missile instruments against shock and vibration.

The acquisition plan calls for conversion of each common share of Kensico into five common shares of Robinson. It will require issuance of 169,305 Robinson shares in addition to the approximately 382,000 outstanding. Stockholders also approved an increase in the number of authorized common shares from 500,000 to 850,000.

Thomas Nast, Kensico president, Stanley J. Keyes, Jr., chairman of the advertising firm of Adams & Keyes, Inc., and John C. Rowland, Kensico vice president, were added to the Robinson board.

Edw. P. Bailey, Sr. Dies

PHILADELPHIA — Edward P. Bailey, Sr., 87, counsel and former president of National Airoil Burner Co., died recently at his home here.

Bailey was co-founder in 1912 of the company he headed until 1958 and was a pioneer in the oil burner industry.

'59 Sales 44% Ahead of '58

York Packaged Products Section Has Most Successful Year In Its History

YORK, Pa.—For the Packaged Products section of York Div., Borg-Warner Corp., 1959 was the most successful year in the company's 75-year history, according to Austin Rising, vice president and director of marketing.

Packaged Product sales in 1959 were 44% ahead of 1958 to set the new high.

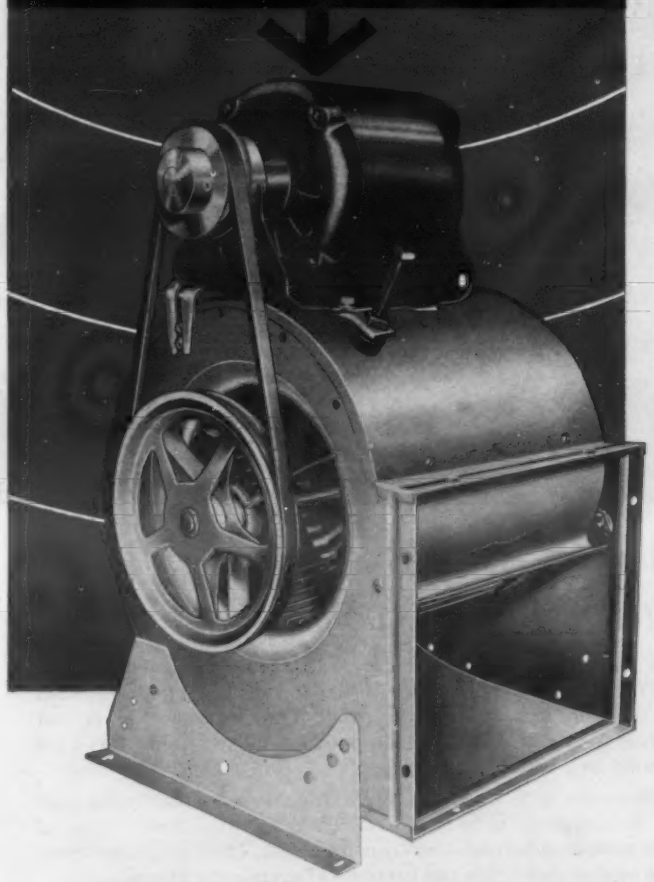
"Indications point to an even bigger 1960," Rising stated. "We have just completed a coast-to-coast series of distributor meetings. The orders received from our distributors for 1960 merchandise are substantially ahead of 1959 at this time.

"If this order pattern continues, and we are confident that it will, York will enjoy a truly fabulous 1960."

York's Packaged Products Section manufactures and sells room air conditioners, residential and commercial air conditioners, heat pumps, and furnaces as well as ice makers and condensing units.

Several additions to these product lines were introduced at the firm's distributor meetings. These include a 33-ton water-cooled commercial unit, several new heat pumps, both in the room and residential lines, new room air conditioners, and a brand new electric duct heating system.

SERIES A



"Features exclusive LAU FIRSTS"

Here's the most versatile blower manufactured today! The Lau Series A is extremely efficient in many applications because of its availability in such a complete performance range. Assorted wheel sizes, four standard discharge positions, and a wide selection of C.F.M. characteristics mean you can specify a blower that's practically custom made for you . . . at no extra cost.

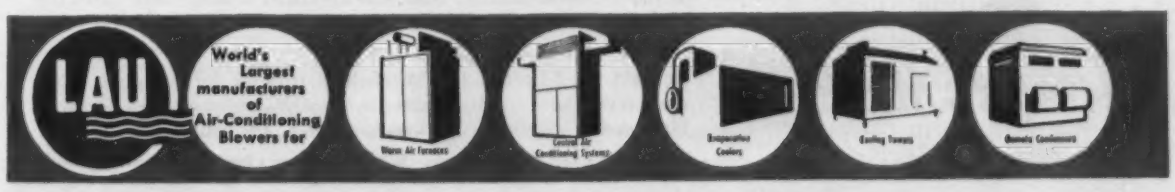
Standard Series A features include such Lau exclusives as Preslok® wheels, ground and burnished shafting, Lau Pak Gold Seal bearings, tripod bearing brackets, heavy gauge housing supports, versatile motor mounts, and Lausteel pulleys.

Series A blower assemblies are recommended for warm air furnaces, central air conditioning systems, evaporative coolers, cooling towers, and remote condensers.

Write or call Lau today. We will place you in contact with your experienced Lau Sales Engineer. He's always nearby and ready to help you solve any air moving problem.

The Lau Blower Company, 2027 Home Avenue, Dayton 7, Ohio.

Other plants in Kitchener, Ont., Can., and Irwindale, Calif.



14-Month Survey Reveals

Air Conditioning In Australia Viewed as Promising Opportunity for U. S. Capital

SAN FRANCISCO—A market for central heating and air conditioning equipment is one of a number of emerging opportunities pin-pointed in Australia by economists at Stanford Research Institute of Menlo Park, Calif., as part of conclusions reported recently after 14 months' research in that country.

This is one of a number of so-called "promising opportunities" for investors both in the United States and the United Kingdom uncovered by SRI during an independent and objective research program financed by government funds and contributions from private industry in the state of Victoria, starting late in 1958.

The team of economists assigned to the project reported that initially 100 opportunities were identified as possibilities worthy of attracting serious consideration of overseas businessmen and investors. Then 60 of those judged most promising were studied, with some of them subsequently eliminated because of the unique circumstances of investments taking place during the course of the study which met the market need and thus eliminated the opportunity.

In its detailed 145-page report, SRI limited itself to nine typical opportunities, although, it was emphasized, they were not necessarily considered to be all of the best opportunities now existing, but rather were considered by the researchers to be representative of some of the more attractive in Australia, and particularly in Victoria.

Melbourne, the financial and business center of Australia, a city of 1.8 million (Victoria's population of 2.8 million represents 28% of Australia's total 9.9 million), is the principal headquarters for the manufacture of such products as motor vehicles, farm machinery, footwear, textiles, electrical products, clothing, and chemicals.

SRI declared in the report that "there is a definite trend toward central and room air conditioning in Australia that is being urged along by the climate and the rising standard of living."

Fireplaces and chimneys are being omitted from new homes and the savings are being used to help pay for central heating. One out of nine new homes, according to one trade estimate, has some sort of fixed central heating unit.

In the view of SRI, if the costs of small central heating units and window air conditioners can be reduced to somewhere near United States levels, a really worthwhile market for new homes seems in prospect. Inclusion of a central heater in the price of the 65,000 to 80,000 new homes being built per annum would be a major factor in expanding the market for central heaters, it was emphasized.

At present, it was pointed out, except for larger buildings such as stores and restaurants, offices, and hotels, central heating and air conditioning is not generally used in Australia. At the moment, it is estimated that only about 30 firms are in the air conditioning business, many of whom are primarily installation and service firms.

Climate Almost as Varied as In U. S.

"Australia's climate is almost as varied as that of the United States," SRI recalled. "There is no part of the country that cannot be considered a long-term market possibility for either air conditioners or central heating equipment."

Over-all, these economists said their studies have confirmed that the growth economy and political stability of Australia makes that country a most attractive area for business investment for American interests.

The SRI report pointed out that the need for capital in Australia is great and is increasing at a more rapid rate than the general population growth, expected to reach 13 or 14 million by 1975. Significantly, it revealed there has been a substantial decline in overseas capital entering Australia from the United Kingdom since the end of World War II and a decided upswing from the United States and Canada.

Today, the U.K.'s share represents 60% while that from the U.S. and Canada totals about 25%, the balance coming from many countries.

"To sum it up," the report stated, "the government of Australia sees a long period of capital shortage, and seems willing to do anything reasonable to encourage the flow of overseas capital to Australia for both public and private investment."

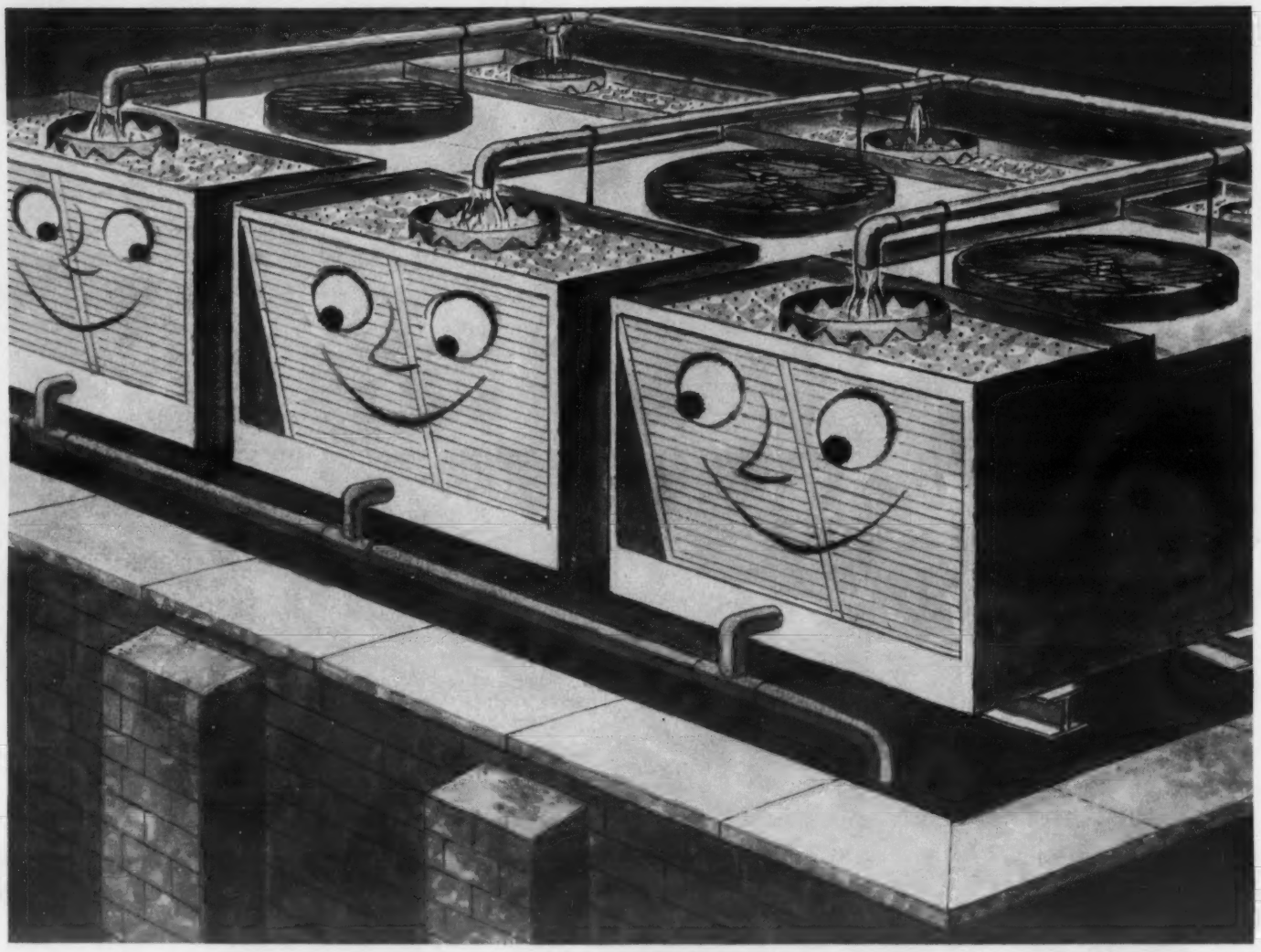
The total U.S. investment in Australia is about $750 million, of which two-thirds is in manufacturing. About two-thirds of the earnings accruing from U.S. investments in the 1956-57 period was reinvested.

Latest figures indicate that about 200 Australian manufacturers and subsidiaries or affiliates of American organizations, and about 600 others have entered into licensing or royalty agreements with American companies.

Information Available from Representatives In U. S.

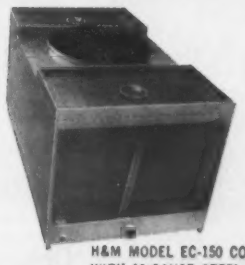
To assist U.S. firms interested in investment or business opportunities, the Victoria Promotion Committee, a group of business leaders appointed by the State Government, has retained International Business Relations, Inc., 209 Post St., San Francisco, and 501 Madison Ave., New York, as its U.S. representatives.

Copies of the SRI report "Investment Opportunities in Victoria" may be purchased from the San Francisco office of International Business Relations for $10 per copy, plus 51 cents mailing charges.



How to cut costs on a 450-ton cooling job:

Use three Halstead & Mitchell 150-ton cooling towers!



H&M MODEL EC-150 COOLING TOWER WITH 10-GAUGE STEEL CABINET

Halstead & Mitchell

How can three units be cheaper than one? Simple. Halstead & Mitchell packaged cooling towers come to you completely assembled and therefore less expensive to install. They operate at lower cost because there can be no wasted capacity; with step-control, you get capacity as you need it.

Furthermore, with "modular" units, you can place each tower near the equipment it's to be used with. This gives you closer control of water temperatures—another economy factor. Then, too, if one tower must be shut down, you can continue to operate the others.

The advantages go on and on: lower silhouette, lower rigging costs, and utmost flexibility—towers can be easily moved or supplemented as requirements change. And, like all H&M towers, these carry the exclusive 20-Year Guarantee on the wetted deck against failure due to fungus attack or rotting.

Contact your Halstead & Mitchell distributor for complete information on H&M cooling towers in 3- to 150-ton capacities. Or write Halstead & Mitchell Co., Bessemer Bldg., Pittsburgh 22, Pa.

Cooling Towers • Water-Cooled Condensers • Air-Cooled Condensers • Finned Coil Products • Air-Handlers

New Australian Skyscraper Will Extract 'Climate' from Sydney Harbour Water

PORT MELBOURNE, Australia—The heat pump air conditioning system for a skyscraper now under construction in Sydney for the Australian Mutual Provident Society will have the unusual feature of using water from Sydney Harbour to cool the building in summer and heat it in winter.

The A.M.P. Society has awarded the subcontract for air conditioning of its Sydney Cove building to the Australian firm, Frigrite Ltd.

The 370-ft. building will have 26 floors. It will house the society's head office and N.S.W. Branch, and the 14th to the 22nd floors will be let.

The air conditioning system has been designed and engineered by Frigrite in association with Worthington Corp. of America, a large shareholder in Frigrite, according to a report on the project by the latter firm.

300 Ft. Tunnel To Reach Sea Water

"The sea water will be obtained by tunnelling horizontally 300 ft. from the building site through solid sandstone to the harbour," it was explained. "The tunnel will pass beneath Alfred Street and the Circular Quay railway and warf area.

"The refrigeration plant will use sea water at the rate of approximately 180,000 gals. an hour.

"Employing the Worthington centrifugal refrigeration system, with power of 1,300 hp., refrigeration produced will be equal to that of 500 tons of ice melting during each normal working day.

"The same refrigeration plant that provides cooling for the building's air in the summer will provide heat in the winter. This will be done by using the reverse cycle system of refrigeration known as the heat pump.

"In winter, this plant will cool the sea water being drawn continuously from the harbour, 'trapping' the heat removed during this refrigeration process, and transferring the heat to other air conditioning plant.

Harbor Water Drops As Low as 50°F.

"Sydney Harbour water usually drops in temperature during winter to as low as 50° F. Even at this low temperature, the heat extracted from the water will be sufficient to heat the skyscraper to 70° F. when the outside air temperature is as low as 45° F.

"The heat extracted from the sea water will produce the equivalent of as much as 1,500,000 watts of electrical heating each day."

Frigrite said it designed the air conditioning and refrigeration system for the building using techniques and "know-how" of Worthington Corp.

Barber-Colman air diffusers, made by Frigrite under license to Barber-Colman Co., of Rockford, Ill., will provide "engineered air distribution" patterns in the building.

"Distribution of air through the building will be by high-velocity and medium-velocity air ducts, totalling 40 miles in length," it was pointed out.

"Air distribution in offices on the perimeter of each floor will be by the Worthington Induction Unit system, allowing individual selection of temperature in each office at the touch of a switch.

"High-velocity air ducts will serve this part of the system. This type of duct means less weight in the building and less space occupied, leaving more room for office use.

"Worthington sound silencers will be used on all air ducts and items of air conditioning equipment in occupied areas of the skyscraper so that occupants may work in continual quietness.

"Frigrite will also provide ventilation systems for the building's toilets, kitchens, garages, etc.

"The total air circulation in the building will be more than 30,000,000 cu. ft. an hour, air conditioned from plant of about 2,400 hp.

"Special precautions will be taken to remove all dust from air coming into the building and, for this purpose, electrostatic air filters have been chosen.

"Humidity will be controlled not to exceed 50% throughout the year."

Air conditioning equipment for the entire building will be on the 13th floor of the skyscraper and the main refrigeration plant will be in the sub-basement.

The air conditioning equipment has been designed to function automatically in response to weather changes.

The new building will house 3,200 people. It will be of "curtain-wall" construction with glass extensively used on all north and south walls of the "H" section building.

Other walls will be of brick and concrete, with brick walls faced with inch-and-a-half thick marble and with glass tiles.

A tower block for machinery and a garden will be on the roof.

Two floors will be given over to such features as restaurant, canteen, table-tennis room, billiards room, and lounges. A theatre-auditorium to seat 270 will be provided.

St. Louis Claims 6,300 Cooled Hotel Rooms

ST. LOUIS—The St. Louis Hotel Association reported that local hotels and motels now have more than 6,300 air conditioned rooms.

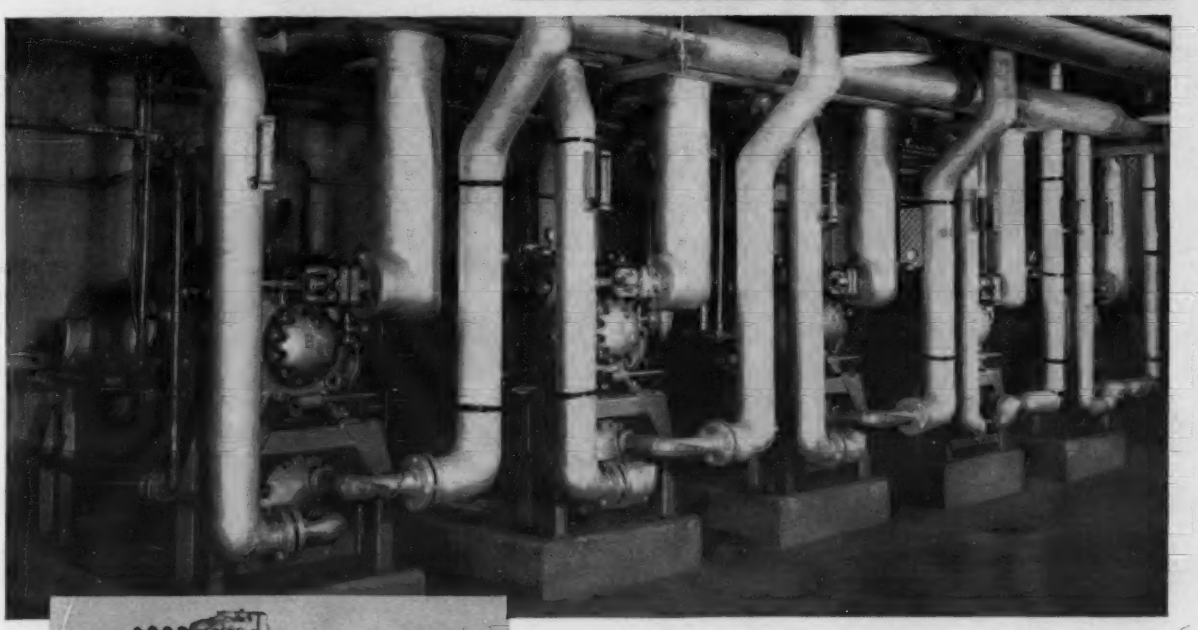
A statement issued by an association spokesman claims that this "is a larger percentage of air conditioned hotel rooms than any other city, regardless of size."

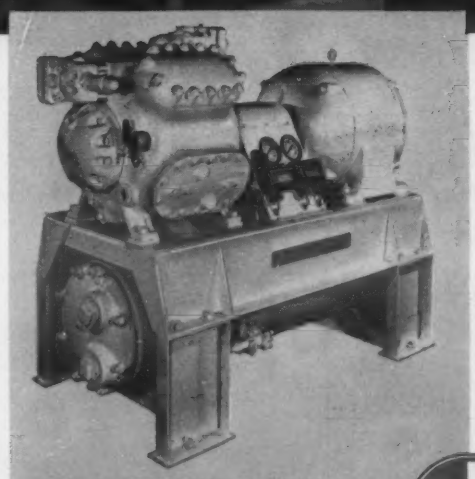
To Cool Frankfort Hotel

FRANKFORT, Ky. — The Capital hotel here has been leased to the Kentucky Management & Development Corp., Louisville.

Tyrus Davis, head of the Louisville concern, says the latter plans to spend $150,000 to $200,000 in remodeling the hotel's interior and installation of air conditioning throughout.

B & G® CONDENSING UNITS SELECTED FOR KANKAKEE, ILLINOIS, STATE HOSPITAL





B&G CONDENSING UNIT
An achievement in design, featuring interchangeable vital parts. 7½ through 150 tons. Performs with effortless smoothness, but with rugged brute strength available when required.

This modern institution was constructed in 1959 under the direct control of the Division of Architects and Engineers of the State of Illinois. The consulting engineers for the mechanical equipment were E. R. Gritschke & Associates, Chicago, Illinois. Burge Ice Machine Co., Chicago, Illinois, made the installation. The B&G low temperature equipment selected to meet the exacting food preservation requirements of this installation was three 25 HP and two 20 HP low temperature Condensing Units.

The B&G Compressor is a notable advance in refrigeration engineering. It is distinguished by *quieter operation —less vibration!* All Compressors have *one* bore diameter —a few interchangeable parts will service all units, reducing maintenance problems.

Remember, too, that *all* major parts of B&G "package" units are made and guaranteed by Bell & Gossett Company. This "plus" design feature means greater dependability—greater value per dollar.

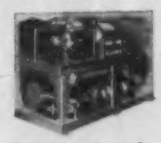
BELL & GOSSETT COMPANY
Dept. GB-47, Morton Grove, Illinois
Canadian Licensee: S. A. Armstrong, Ltd. 1400 O'Connor Drive, Toronto 16, Ontario

A COMPLETE LINE OF REFRIGERATION AND AIR CONDITIONING "PACKAGES" AND COMPONENTS

B&G Evaporators

B&G Centrifugal Pumps

B&G Condensers


B&G Package Liquid Coolers

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

It would be one of the ironies of history if, while the Russians integrate their industries to achieve lower production costs, we turned in the other direction and weakened the ability of our corporations to compete in world markets by making them smaller.

No longer do our big producers find most of their competition among other American companies. Increasingly, American industries derive more and more of their business from overseas. Of the largest, several now obtain from 40% to 70% of their income from operations in other countries.

Among those U.S. industries selling widely overseas are the makers of electrical equipment. Few have done more to make the comforts and conveniences of life widely available. Their radios, refrigerators, washers, and air conditioners have brought better living to peoples world-wide.

In America the amount of electricity consumed, has, roughly, doubled every 10 years. Investments required to generate it, and to provide appliances to use it, have gone up in proportion.

As a result of the billions that have been spent to research and develop such equipment, a householder who worked 580 hours to buy a refrigerator in 1931 had to work only 188 hours to buy one in 1958. And the same is true of virtually all other better home living aids.

"Despite its rapid growth, and the constant increase in the invested capital required by the electrical industry, there are more small electrical suppliers today than there were 10 years ago," reports LOOK.

"This demonstrates the wealth-generating attribute of big business, supporting and energizing a vast and always increasing host of small businesses.

"In the light of these facts, it is time to re-examine the credo that bigness means monopoly and higher prices. In America, bigness has meant just the opposite. It has raised our living levels year by year. And now when we need it most, we find that bigness—with its resulting efficiency and economy—is also the armory of our defense."

If at this juncture we decide to stifle bigness and efficiency, we can be sure that the Russians will not. Nor will our other competitors in the world markets.

Such a policy could result in the loss of our world business, a drastic lowering of our standard of living, and our inevitable decline as a world power.

We have plenty of checks today against any bad effects of bigness . . . such as exorbitant profits. What we should be more concerned about is whether our industries will stay strong enough to meet tough foreign competition in world markets and make any profit at all.

If, in this crisis, we decide to go the other way—if we force big industries to split themselves into smaller, less efficient units—only three more words remain to be written.

"We've had it."

Alibi Almanac for Salesmen

JANUARY—People spent all the money for the holidays.

FEBRUARY—People saving their money to pay their taxes.

MARCH—Everybody's paying their taxes.

APRIL—People spent too much on Easter.

MAY—Looks like a wet summer, everyone worried.

JUNE—Everybody is saving for a vacation.

JULY—Everybody is away on vacation.

AUGUST—I was on vacation.

SEPTEMBER—Everybody is back from vacation and broke.

OCTOBER—Customer waiting for fall clearance or for new models.

NOVEMBER—Everybody too upset over elections.

DECEMBER — Customers spending all their money on Christmas.

Stories of the Week

"My husband doesn't drink, smoke, gamble, or flirt with girls," Sybilla mentioned. Then she paused for two seconds.

"Maybe that's why I can't stand him—no initiative."

"Wish my mother would let me have a dog," sighed Jimmy. "I ask her and ask her, but nothing."

"You're a poor salesman," chided Bobbie, patting his Trigger affectionately. "You gotta beat around the bush with wimmin. Beg her for a baby brother. You'll see. She'll settle for a dog."

Mary had a little lamb.

Sure surprised her obstetrician.

Wonder why Noah didn't swat BOTH flies when he had the chance?

Also the pair of mosquitos?

Final Ideas

In the process of education the teacher is a guide and a counselor. The real purpose is achieved when the student is inspired to find out things for himself. Reading is a basic in his intellectual progress, and books are his tools. The more they are comprehensible, the greater is his achievement. If he seeks them, knows how to use them, and lets them serve his needs, he has acquired the essence of reading. A nation full of avid readers will not become second-rate. — GEORGE FISLER, *Philosophy Chairman, Adrian (Mich.) College.*

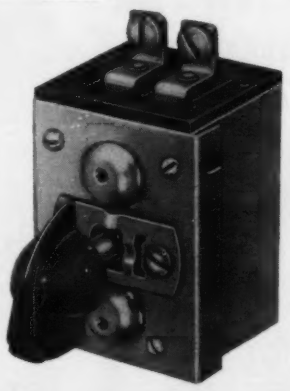
When a reformed African headhunter recently was asked why his people used to take heads, he gave four reasons. They were: to impress other men with your bravery, because everybody else did it, to get ahead of others by being awarded the best seats at feasts, and to impress the girls. Although this primitive didn't know it, he had neatly summarized the reasons for most of the trouble in the world today.—*Jacksonville Times-Union.*

The desire for knowledge, like the thirst for riches, increases with the acquisition of it. Pleasure is a shadow, wealth is vanity, and power a pageant, but knowledge is ecstatic in enjoyment, perennial in fame, unlimited in space, and infinite in duration.—LEON GUTTERMAN.

NEW WILCOLATOR TYPE G1

thermostat

HELPS YOU DESIGN MORE COMPACT HEATING CONTROLS



SINGLE-POLE, REMOTE-BULB UNIT COMBINES SMALL SIZE, HIGH CAPACITY, LOW COST

Photo courtesy Electromode Division of Commercial Controls Corporation

Combination of small size and high capacity offered by new Wilcolator G1 Thermostat is used to advantage in compact control panel of Electromode baseboard heater.

Because of its improved-design, snap-action switch mechanism, the new Wilcolator Type G1 Thermostat provides significantly higher contact ratings than were previously available in such a compact unit (2¾ x 1⅝ x 1⅞ in.). Thus you can utilize this new thermostat to design smaller, more efficient control panel assemblies for space heaters, ranges and similar appliances. At the same time, you can also reduce costs, because the G1 is generally priced lower than its bulkier counterparts.

The Wilcolator G1 Thermostat gives you accurate temperature control of practically any electrically heated medium—liquid, solid or gas—from 0 to 585°F. Its contacts are vibration proof and will not cause radio or TV interference. Temperature differential is adjustable and can be factory set to your specifications. Switch mechanism includes positive Off position.

For further information, write The Wilcolator Company, 1001 Newark Ave., Elizabeth, N.J. *In Canada:* Wilcolator (Canada) Ltd., 221 Evans Ave., Toronto 14, Ont. *Export:* Wilcolator, 1010 Schaff Bldg., 1505 Race St., Philadelphia 2, Pa.

SPECIFICATIONS

Temperature ranges: 0°F min.; 585°F max. Special temperature ranges: to customer's requirements

Contact rating: 30 amp, 125 and 250 volts a-c noninductive load

Standard shaft: ¼ in. diam. flatted to .156 in. Length to customer's requirements. Special shafts available

Dials: Standard or special dials, pointers, and chrome bezels available

Terminals: Screw type, AMP or Arkles

THE Wilcolator COMPANY

THE WILCOLATOR COMPANY
1001 NEWARK AVE., ELIZABETH, N.J.

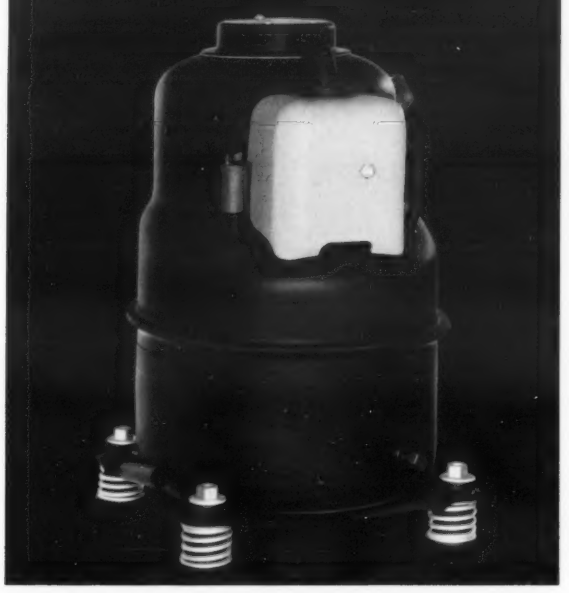
Subsidiaries and/or Affiliates in Canada, Great Britain, Italy, Western Germany, and Australia

NEMA

BLUE RIBBON QUALITY... AWARD WINNING PERFORMANCE

One of the most valuable features you can give your air conditioning or refrigeration equipment is a compressor that really performs under pressure. And when you install Bendix-Westinghouse, you're installing the best. No other can match them for dependability and downright quality. Turn the page and read all about the new Bendix-Westinghouse compressor that can help you cut production costs on heat pumps and air conditioning units.

Bendix-Westinghouse MOTOR COMPRESSORS



MANUFACTURERS: YOU'LL FIND NEW BENDIX-WESTINGHOUSE COMPRESSORS LOWEST IN COST, HIGHEST IN EFFICIENCY!

There's no better way of cutting production costs than including this new Bendix-Westinghouse YH1020TA 4-h.p. compressor in your blueprints for heat pump and air conditioning units.

Due to its two-pole design, it is compact in size, so takes less installation space. Lighter in weight . . . so saves on shipping costs. Lower in price . . . so saves on your production costs.

Like all Bendix-Westinghouse compressors, this brand-new model utilizes full gas suction cooling and positive pressure lubrication. Maximum performance in every operating range is assured by an inherent overload protection system. Motor insulation is of the latest and best type.

All this adds up to a longer life expectancy with trouble-free performance and ready customer acceptance. Call or write direct for prices and detailed specifications.

Bendix-Westinghouse

EVANSVILLE, INDIANA

A Division of Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio
Export Sales: Bendix International, 205 E. 42nd St., New York 17, N. Y.

Central Air Conditioning System Cited As Feature of N. Y. Apartment Bldg.

NEW YORK CITY—What is claimed as "the most advanced air conditioning system yet devised for an apartment building" is being featured in the 20-story cooperative apartment building under construction at 700 Park Ave. here.

A 330-ton York centrifugal compressor will provide cooling for the chilled water system serving the 48 apartments in the building being put up by Tishman Realty & Construction Co.

Central ventilation to augment the fan-coil units in each apartment is also incorporated in the system.

Why Central System Was Selected

Choice of a central chilled water and ventilation system over the built-in wall units that have become so popular in recent years was made for several reasons, a representative of the builder explains:

1. "The life of the central system is much longer than the through-the-wall system. The system is also much more dependable and requires less maintenance."

2. "Fan-coil units are quiet compared with wall units."

3. "Ventilation air is introduced through a central system rather than at each unit. This permits positive introduction of ventilation air at all times. It also permits the continuous treatment of the ventilation air such as dehumidification, cooling, and filtering independently of the cooling requirements for the space."

The York hermetic type unit will chill water to 45° F. For winter operation, water circulated to the fan-coil units will be heated by steam converters. Individual controls will be provided for each apartment.

Kitchens, Baths To Have Separate Exhausts

Ventilation air will be supplied to each room of each of the 48 suites other than kitchens and bathrooms. Separate central exhaust systems will be provided for kitchen and bathroom ventilation, and electric heaters with individual controls will provide supplementary heat for the bathrooms as needed.

In addition to wall-type thermostats for each apartment, there will be blower speed controls on each fan-coil unit.

Sizes of the apartments, which will vary from six to 10 rooms, are of generous proportions. All-electric kitchens, car elevators, wood-burning fireplaces are features planned.

Kahn & Jacobs is the architectural firm involved, with Paul Resnick and Harry Green as associate architects on the job. Consulting engineer is Cosentini Associates, and the mechanical contractor is J. E. Schecter Corp.

Stewart-Warner Dealers Win Nassau Trips

LEBANON, Ind. — Stewart-Warner Heating and Air Conditioning boosters reaped the rewards of top sales efforts in the manufacturer's recent Nassau trip contest.

Stewart-Warner dealers and their wives were awarded a six-day, five-night all expense stay in Nassau for achieving a sales quota. Winners were flown to the island resort, where their stay was enlivened by sightseeing tours, visits to native night clubs, and a "Go Native" party.

EEI Conference Set for Chicago April 4-6

NEW YORK CITY — More than 1,000 sales executives of the electric power industry are expected to attend the 26th annual sales conference of the Edison Electric Institute, according to E. O. George, chairman of the EEI Sales Div. Executive Committee and vice president of the Detroit Edison Co.

This year's conference will be held April 4 through 6 at the Edgewater Beach hotel, Chicago. Highlighting the program will be the general sessions on Tuesday and Wednesday mornings, April 5 and 6.

The theme of Wednesday's general session will be the "all-electric concept." C. M. Wallace, Jr., vice president, Georgia Power Co., will deliver the opening remarks. The all-electric concept of the architect will be discussed by a senior student at the University of Notre Dame, Richard W. Quinn.

Arthur S. Goldman, director of marketing, *House and Home* magazine, will talk about the builder's viewpoint on the all-electric concept. Discussion of the subject will be concluded with the manufacturer's viewpoint, as seen by Fred J. Borch, vice president and group executive of consumer products, General Electric Co.

The conference will open on Monday, April 4, with meetings of EEI Sales Div. Committees. Committee group meetings are scheduled for Tuesday afternoon.

For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.
Only 25¢ each.

Series 271 single pole and Series 1273 two pole dual function. Temperature models available.

Below . . . Series 270 single pole and Series 1272 two pole single function for either low or high pressure. Also temperature models.

YOU CAN DO MORE JOBS WITH LESS CONTROL INVENTORY!

Penn's line of refrigeration controls has the capacity and versatility to satisfy all cooling requirements! Single or double pole models are available for all types of applications and are rated to handle single or polyphase motors from 1 through 5 H.P. capacity!

And, you get real economy, too. The two pole heavy duty models eliminate the need for motor starters when used on polyphase motors with built-in overload protectors. With their two separate circuits, these models are really 2 switches in 1. Don't settle for less . . . ask your wholesaler for Penn Controls!

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 39th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

They'll Do It Every Time

by Jimmy Hatlo

THE NEW SCHOOL WAS TO BE BUILT AND THE CONTRACTORS FIGURED THE BIDS TO THE LAST BRICK--
JUST LEAVE YOUR SEALED BIDS, GENTLEMEN--WE'LL LET YOU KNOW WHO GETS THE JOB....
WELL, I'M LOCAL--DON'T SEE HOW ANYBODY CAN BEAT MY PRICE....
SO WHO GETS THE JOB? A LOCAL GUY? NOPE--USUALLY THE BUILDER FROM THOUSANDS OF MILES AWAY....
THANK AND OUR HAT IS OFF TO TOM BROWNE, WATERFORD, N.Y.
WE BRING BIG TOOLS ALL WAY FROM ALASKA--THROUGH PANAMA CANAL...
FRAMMIS HIGH SCHOOL BEING ERECTED BY NOME ALASKA CONSTR. CO.
1-5

Here's How to Build Residential Air Conditioning Sales – SERVICE!

(Concluded from Page 1)

customer as to what it really will cost him, kidding yourself on profit margins—anything to keep a competitor from getting the job.

Long ago consumers learned ugly lessons the hard way about price quotations that don't stick, or which aren't made good. Especially is this true in the home improvement field—where painters, carpenters, plumbers, electricians, and handy-men may quote $50 for a job and then charge $200 later—if they show up at all.

In air conditioning distribution there's an unfortunate tendency to whittle pennies off quoted installation costs by befuggering calculations—or by inserting hidden booby traps—instead of garnering sound dollars and owner satisfaction through better selling, better service, and guaranteed prices.

"Better Selling" means helping the buyer understand what he's paying for, assuring him as to how home air conditioning will benefit him and his family—and gaining his confidence by not *overselling* (promising performance which doesn't come).

Few customers have any conception of the tortuous route by which manufactured goods get to them through distributors, contractors, dealers, and installers.

Furthermore, they couldn't care less. But they do want peace-of-mind. They want to know that they aren't being gypped either on price or quality.

That peace-of-mind is something they attain only when they truly trust a local dealer or contractor. This man must earn that trust.

Our typical buyer of residential air conditioning isn't interested in purchasing pounds of steel and aluminum and copper and plastics at so much per pound or so many dollars per B.t.u.

He hopes he is acquiring a *continuous service* for his personal betterment, and for the health and welfare of his family.

Hence, the distributor or contractor-dealer who intends to stay in business for a dozen years or more must retain sufficient margin from his transactions to insure that each customer he sells will receive henceforth the sort of service and "peace of mind" which the latter expects and deserves.

And then he must deliver that service to earn such confidence.

If this local dealer pursues odd-ball pricing policies, puts out unreliable quotations—or fudges on the installation—he won't maintain the confidence of families in his bailiwick—nor will he gain it in the first place.

He's a poor bargain for the manufacturer who franchises him.

That's why the fetish of "rapid retail turnover" in itself doesn't build long-term capital gains for manufacturers, or for their local representatives.

It may help a sales manager establish a personal record in a certain year—but it raises havoc with those customer relationships which are synonymous with long-term success.

People who promote residential air conditioning should be selling a better way of living to their community neighbors—rather than indulging in a get-volume-by-any-tactics, competitively cut-throat, who-cares-about-tomorrow operation.

The "little woman" is most eager to live better in an improved home. However, she's the one who demands genuine service, because she has to *live* with the air conditioning you can sell her. That's why she's the person who is most "put out" if it doesn't work properly.

Modern women are restless, demanding, dissatisfied. This fact should not alarm us. Contrarily, it should stimulate us. If we can interest and satisfy the gals, GOOD services such as our industry can offer should be easier to sell than ever before.

Those of us in the air conditioning industry are pioneers in this respect. We offer wives something new and exciting—comfort, family health protection, and "a magic mirror" (better appearance) for herself.

Right there is an all-purpose promise which restless, never-satisfied-with-their-homes women should want.

Let us not forget, though, that women are wary. They detest the feeling that they've been "taken." Amphorus pricing policies will make them suspicious at the outset. Bum service will confirm their suspicions. Poor installations will incur their wrath and indignation.

Unless your firm is firm about these matters, disgruntled women will kill sales of air conditioned homes among their friends and neighbors for years to come.

Obviously, it is high time that a lot of people in the residential air conditioning business "smarten up" and build for the future, instead of trying to meet artificial sales quotas — or smother competition at any cost — through false or faltering pricing and servicing.

America's general public is the umpire of any competitive contest, and the final arbiter of our business futures. That "general public" places a premium on fair dealing.

(Incidentally, everything said above goes double for industrial air conditioning—which even more is handicapped by shoddy pricing and practices.)

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'The Conscience of the Industry'

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"A newspaper conducted on the true and natural principles of such a publication ought to be the register of the times, and faithful recorder of every species of intelligence. It ought not to be engrossed by any particular object, but, like a well-covered table, it should contain something suited to every palate."—*John Walker.*

READER SEEKS ARTICLE ON CAPILLARY TUBES

"A Subscriber"
St. Louis, Mo.

Editor:

Please run an article on capillary tubes as most small jobs use them.

C.K.

(Editor's Reply: Future Tech-centers will discuss the theory and application of capillary tubes, automatic expansion valves, and thermostatic expansion valves.)

THE WAITRESSES WILL LIKE THIS LITTLE LAD

Editor:

As secretary for the Stewart Distributing Co. I am asked to read AIR CONDITIONING NEWS, and other publications. I enjoy reading your column very much.

"Inside Dope" readers might be interested in this little story about by two boys, Tim, aged 4, and Chris, aged 3.

They were taken to see Santa Claus. Since Tim had talked to him before, he was not afraid, and went right up to sit on Santa's knee and elaborate on all the things he wanted Santa to bring.

But Chris, who was hesitant, stood off to the side and listened. When Santa had finished with Tim, he pointed to Chris and said:

"Now, what about this little boy; what can Santa bring him?" To which Chris replied, leaning forward a little and talking loud and clear, "Make mine same as his!"

MRS. BARBARA S. PFAFF

'Forced Humidifiers' (4)

14 Makes of Forced Humidifiers Described and Pictured

This is the fourth of a series of articles dealing with "forced humidifiers"—a relatively new product offering interesting sales possibilities for the residential heating and air conditioning contractor. Broad tspects of the subject are being discussed in the series, including the market, sales approaches, applications, and service plus specific information about 14 different makes.

The material was gathered in personal, phone, and mail interviews with many individuals, including manufacturers, dealers, and others.

Brief descriptions and photos of 14 different makes of forced humidifiers follow. The listing does *not* pretend to include *all* the manufacturers in the field, but certainly the leading firms are among those present, and just about every basic type of forced humidifier designed for residential furnace application is described.

It should be noted that many manufacturers also produce and market "self-contained" and other type humidifiers for residential, commercial, and/or industrial use, but these products have been purposely omitted because this series has been limited to units for residential furnace installation.

The following listing is in alphabetical order by the manufacturer's name, not the trade name.

Arklon

Arklon Mfg. Co., P.O. Box 3501, Cleveland 18.

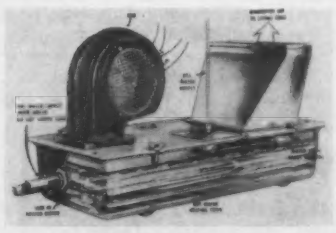
Model 65 "Bon-Air" unit is an atomizing type humidifier with a motor operated spray wheel. A neoprene O-ring suspended from spinner shaft brings water to center of revolving copper plate.

Water supply is controlled by float valve.

Operation of spinner motor is controlled by furnace blower. No humidistat is required.

Unit can be mounted on furnace plenum or duct.

Capacity is described as "equal to 10 to 12 evaporator plates when the plates are brand new."



Armstrong

Armstrong Machine Works, 8445 Maple St., Three Rivers, Mich.

Available in several models, the Armstrong "Humid-i-maker" is a vaporizing type unit employing either hot water coils (see cutaway illustrated) or an electric immersion heating element.

A blower on the unit forces air across a heated, water-filled pan. When used with a warm air system, intake and discharge ducts must be provided between humidifier and furnace. A discharge duct is also usually required when unit is employed with hot water or steam heating.

Hot water for water-coil models may be obtained from the hot water or steam boiler of hydronic systems, or when used with a forced air furnace from the domestic storage type water heater. Electric heating elements can be used instead, however, with a choice of 115-volt 2,000-watt or 230-volt 4,000-watt elements.

Water supply to pan is controlled by a float valve.

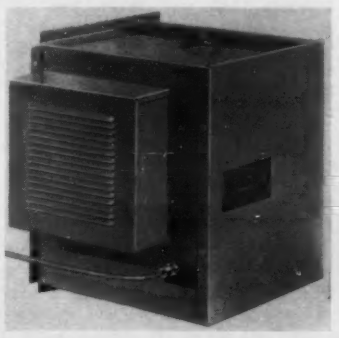
Operation of humidifier is controlled by humidistat, which cycles the blower and heating element (on electric unit) or water-circulating pump if used on water coil model. On forced warm air systems, the humidistat is wired in series with furnace blower control.

Capacities of water-coil models vary from 2.4 to 27.2 lbs. per hour, depending on water coil temperature and whether a water pump is used. Capacities of electrically heated units are listed as 5.5 lbs. per hour for 2,000-watt element; 12.5 lbs. per hour for 4,000-watt element, depending on such variables as outdoor d.b. and w.b., indoor d.b. and w.b., tightness of structure, and entering water temperature.

Auto-Flo

Auto-Flo Corp., 12085 Dixie, Detroit 39.

Model 30 Auto-Flo "power humidifier" is an evaporating type humidifier with a pad, recirculating water pump, and fan. Water is pumped over pad and



humidifier fan draws air from furnace plenum, forcing air through pad and back into plenum. Water supply is controlled by float valve.

Operation of humidifier fan and water pump can be controlled by furnace blower, but a humidistat is optional.

Unit is mounted on the "warm air bonnet or on the furnace casing."

No data on capacity is given.

(To Be Continued)

The new McQuay Hot Rod electric defrost unit cooler gets its name from the brass sheathed calrod heating elements which run through the center section and rapidly defrost the coil. All models of the Hot Rod unit cooler feature casings of hammered aluminum, and are equipped with built-in heat exchangers. McQuay proven quality construction provides direct metallic contact between the heating elements and aluminum fins giving you more complete, trouble-free refrigeration with automatic electric defrosting and without wasting heat. The aluminum drain pan is heated electrically for positive de-icing. All electric heating elements, both fin coil and drain pan, are accessible and easily removable without disturbing the coil or drain pan.

There are eight sizes of McQuay Hot Rod systems ranging in capacity from 3,000 to 32,000 Btu/hr at 10° T.D. Contact the McQuay wholesaler in or near your city, or write McQuay, Inc., 1607 Broadway Street N.E., Minneapolis 13, Minnesota.

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McQuay INC.

AIR CONDITIONING • HEATING • REFRIGERATION

MAKE THE SEASONS COME TO YOU

Trane Improves Climate Changers

● Reduced over-all unit dimensions and a greater number of arrangements and capacities are featured in a new line of central station air handling units announced by The Trane Co., Dept. AH&RN, La Crosse, Wis.

The units are an improved design of the Trane "Climate Changer." Fourteen sizes, with 3 to 63 sq. ft. of coil area, are available in capacities from 1,200 to 47,000 c.f.m. Many unit arrangements, including horizontal and vertical draw-through and blow-through "Multi-Zone" or double duct units, allow exact selection for a specific installation, the company said.

The Climate Changers incorporate new higher capacity "Sigma-Flo" coils. A wavy fin design, developed in Trane laboratories, increases air turbulence within the coil, improves heat transfer efficiency, and results in a more compact coil, it was stated.

"The sectional design of the new unit permits a selection of components that will meet any air conditioning requirement," according to Trane. "Components can be added at any time before or after installation without compromising the basic unit design."

Multi-Zone Climate Changers supply up to 14 zones with independent air conditions. These units may be specified in low or medium pressure ranges, with 26 basic units delivering from 1,750 to 47,250 c.f.m. of standard air, according to Trane.

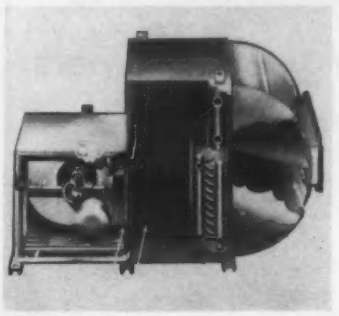
Align-O Guide Prevents Lateral Pipe Movement

● A pipe alignment guide used for guiding of pipe lines which are expanding or contracting because of temperature changes is being manufactured by The Align-O Pipe Guide Co., Dept. AH&RN, 55 Beaver Dr., Barrington, N. J.

Called the "Align-O Guide," the device "permits movement of the pipe line in an axial direction only, which is the desired movement, and prevents any lateral movement of the pipe line which movement would be objectionable," it was explained.

"The Align-O Guide is used before and after expansion joints and loops and at intermediate points; it prevents failure of the expansion joint or loop due to misalignment."

High-Velocity Equipment Offered In 9 Models



● Its new line of high-velocity air conditioning equipment for multi-storied applications is now offered in a broad range of nine models (3,500 to 27,000 c.f.m.), for direct expansion, cold water, hot water, and steam, according to Drayer-Hanson, Dept. AH&RN, 3301 Medford St., Los Angeles 63.

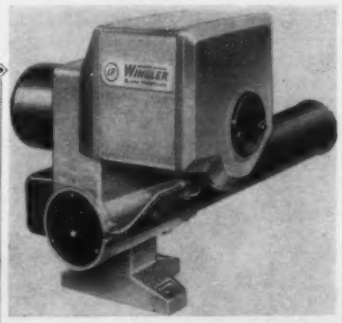
"The line engineered for hot and cold duct operation, at static pressures from 2½ to 8 in., has been redesigned to incorporate numerous new sales factors such as addition of a plenum divider for ease of connecting ductwork on a double-duct system," it was stated. "Units are only two bearing system, even on two-fan types—which eliminates alignment problems on the fan. Bearings are life-time lubricated."

These blow-through-type models, designated HCD, offer great flexibility to planners, it was indicated.

Planner/purchasers are offered the option of horizontal or vertical discharge. Other features include spring-mounted fan and motor assembly, discharge plenum and baffle dividing hot and cold sections.

Insulation is ½ in. glass fiber, covered with vinyl coating.

Drayer-Hanson also manufactures this equipment for operation with zoned dampers. The line is designated HPF; range of sizes is identical to HCD models.



'LP' Oil Burner Offers Major Improvements

● Complete restyling and major engineering improvements are featured in the new Winkler "LP" oil burner announced by Stewart-Warner Corp.'s Heating & Air Conditioning Div., Dept. AH&RN, Lebanon, Ind.

Finished in natural aluminum and Stewart-Warner red, the LP is the low-pressure burner which in actual installations has cut users' fuel bills substantially, according to the manufacturer.

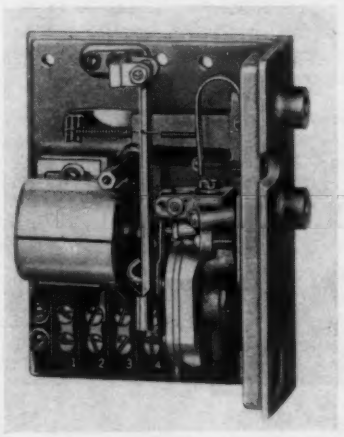
A new mechanical feature is the Heat-Keeper, which prevents stand-by heat loss when the burner is off. The Heat-Keeper is essentially an automatically operated air gate which opens as the burner starts to allow enough air for complete combustion, but shuts when the burner turns off.

A positive displacement fuel meter controls the firing rate and can be sized to fit the heating plant, delivering exactly the fixed amount of oil, it was stated.

A fuel aerator "builds up the proper operating pressure and mixes an exact amount of primary air with an exact amount of oil. Oil-saturated air is then delivered to the nozzle where secondary air is introduced to assure most favorable burning conditions."

Limiting Device Said To Give Positive Protection

● A new limiting device, "engineered to provide positive protection against motor overload and featuring an adjustable demand limiter," has been released by Johnson Service Co., Dept. AHRN, Milwaukee 1.



Called the R-27 load limiting relay, the device, which is designed for use with pneumatic control systems, is intended for application to all types of centrifugal refrigeration compressors. Installed in the pneumatic control circuit and responding to motor current, it limits the opening of the capacity regulating inlet valves or dampers to maintain a predetermined maximum motor current regardless of the demands of other controllers, the company explained.

According to the manufacturer, the R-27 is especially valuable in preventing damage during the "start-up" period and following prolonged or over night shutdowns, "the most common instances of overloading." Highlight of the relay is a remotely located manual adjuster for limiting the motor current to any selected value between 40% and a 100% of the maximum.

Acme Adds 100 and 125-Ton Water Chillers

● Packaged water chillers of 100-ton and 125-ton capacities have been added to the compact HE "Flow Therm" models offered for medium and large commercial air conditioning installations or industrial process applications by Acme Industries, Inc., Dept. AH&RN, 600 N. Mechanic St., Jackson, Mich.

This brings to eight the number of HE Flow Therm models offered by Acme. Ratings of the models in tons capacity now are 20, 25, 30, 40, 50, 60, 100, and 125.

The new chillers feature space and weight savings, hermetic compressor, a greater ratio of heat transfer capacity to shell size for the "Dry-Ex" cooler, and a control box which can be locked to prevent tampering, the company said. If intended for use with air cooled or evaporative condensers, the unit may be obtained without a factory-installed condenser.

Over-all length of the HE-125 is less than 9 ft.; it is 42 in. wide and 66¼ in. high. Operating weight is 5,350 lbs. The HE-100 is less than 90 in. long over-all, 42 in. wide, and 66¼ in. high. Its operating weight is listed as 4,350 lbs.

NOW!

For the first time! complete humidification system in one package!

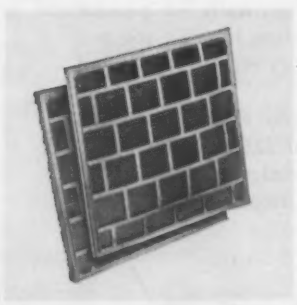
HOMEOWNERS GET MORE MOISTURE-MILEAGE WITH Skuttle's NEW

CORMAIRE Model 900 Humidifier!

This flexible, high quality unit is designed to provide controlled humidification during the entire heating season. The CORMAIRE* uses 20 Vapoglas plates in a corrosion resistant evaporating pan. It can be used as a plate type humidifier, as a controlled humidifier, using the cycling switch or as a completely automatic humidification system, with the utilization of the cycling switch, plus a relay transformer and humidistat as optional equipment.

As an added feature a Swiss made, precision built Hygrometer is included with each CORMAIRE* unit. This instrument indicates the percentage of relative humidity in the air.

Skuttle New low-cost DusT-ban Filters



These LOW-PRICED ($4.95 ea.) permanent filters have electrostatic qualities and are easily washed without oiling. They are framed in zinc-coated steel for rugged, rust-resistant wear. The electrostatic action of the Skuttle DusT-ban Filters guarantees removal of dust, dirt, and pollen particles allowing the free flow of air for maximum heating or cooling efficiency. Sizes 16" x 20" x 1"; 16" x 25" x 1"; 20" x 20" x 1"; 20" x 25" x 1".

A FREE Filter Gage (Value $1.95) is given to each customer with the purchase of 2 Skuttle DusT-ban Filters or $1.00 with the purchase of 1 filter.

*CORRECT MOISTENED AIR

Skuttle MANUFACTURING COMPANY MILFORD, MICHIGAN

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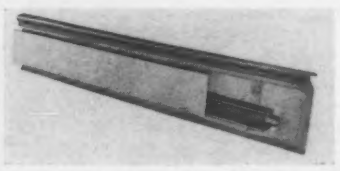


'Panel-Track' Claims Ease of Installation

● A new ¾-in. hydronic baseboard called "Panel-Track" has been introduced by Embassy Steel Products, Inc., Dept. AH&RN, 890 Stanley Ave., Brooklyn 8.

The Panel-Track element has four expansion tracks interlocked to the corners of each fin which provide "full free-flow expansion." There are no clips or slide cradle devices required. Ease of installation was stressed by the manufacturer.

Available in lengths from 2 through 20 ft., in 1-ft. increments, Panel-Track is individually boxed, is always supplied with a mechanical damper at no additional cost, and is equipped with one-piece pendulum-action hangers, the company said.

Refrigerator-Freezers Have Changeable Panels

● Changeable door panels are available for two of the new refrigerator-freezers announced for 1960 by General Electric Co., Dept. AH&RN, Appliance Park, Louisville 1, Ky.

G-E said the panels offer new decorating possibilities. The refrigerator can be blended or matched with the rest of the kitchen by merely changing the door panels.

The panels are available in four G-E mix-or-match colors — turquoise green, canary yellow, wood-tone brown, and petal pink—as well as in special finishes of brushed aluminum, coppertone, and simulated wood grain.

Ice Maker Cleaner Also Sterilizes

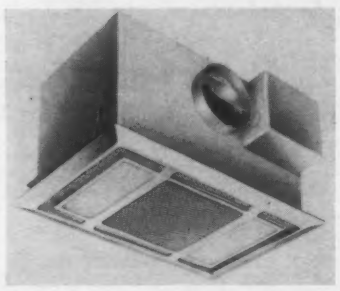
● New "Sure Klean No. 70" not only cleans scale from the water system of cube and flake ice-producing equipment safely but sterilizes as it cleans, claims the manufacturer, The Process Solvent Co., Inc., Dept. AH&RN, 1040 Chelsea Trwy., Kansas City, Mo.

"In addition, Sure Klean No. 70 contains a harmless red dye, known as the Red Safety Factor, that eliminates all guesswork in timing the cleaning job," the company said.

"When all pink traces are removed and the ice is firm and crystal clear, all cleaning solution is out of the unit and the unit is sterile.

It can be used as often as necessary without damaging the equipment in any way or polluting the ice."

Light-Ventilator-Heat Combination Offered



● A flush-mounted bathroom light-ventilator-heat combination has been announced by the Trade-Wind Div., Robbins & Myers, Inc., Dept. AH&RN, 7755 Paramount Pl., Pico Rivera, Calif.

The new addition to the Trade-Wind line of ventilating equipment features instantaneous heat produced by a combination of radiant and convected heat from ribbon heating elements, it was stated. Heat is emitted through a honeycomb aluminum grille located in the center panel. Albalite lenses on the outside edges diffuse light from two 60-watt lamps.

A remote wall switch controls operation of the unit in five different combinations: heater only; lights only; lights and heater; exhaust only; exhaust and lights. A reversible axial flow fan makes possible exhausting or forced air heating.

'Drive-Strap' Speeds Tube Fastening

● A combination strap and nail called "Drive-Strap" was announced by Holub Industries, Inc., Dept. AH&RN, Sycamore, Ill.

It is claimed that this copper tube fastener provides an exceptionally easy way to install radiant heating coils on the ceiling. It drives like a nail and eliminates the handling of two separate pieces, according to the company.

The Drive-Strap comes in two types.

Sealed-Vent Gas Heaters Highlight Line

● New sealed-vent gas wall heaters and gas space heaters highlight the new heating appliance line previewed to distributors at the Hotel Richmond, Augusta, Ga., by Hupp Corp.'s Perfection Div., Dept. AH&RN, 1135 Ivanhoe Rd., Cleveland 10.

Fashion colored kerosene ranges, improved oil space and wall heaters and portable oil heaters were also shown at the distributor meeting.

The "Safety Sealed" wall heaters feature a new through-the-wall vent that brings in outside air for combustion and carries exhaust gases directly outside, eliminating the need for chimney connections, it was stated.

The models are available in 20,000 and 35,000 B.t.u.h. capacities in both forced and gravity circulation designs. Forced circulation models incorporate an exclusive air distribution system combining blower and specially designed slotted grille that distributes warm air at floor level, according to Perfection.

Eight new 1960 vented gas space heaters are offered in both radiant and circulating models. Capacities range from 20,000 to 70,000 B.t.u.h.

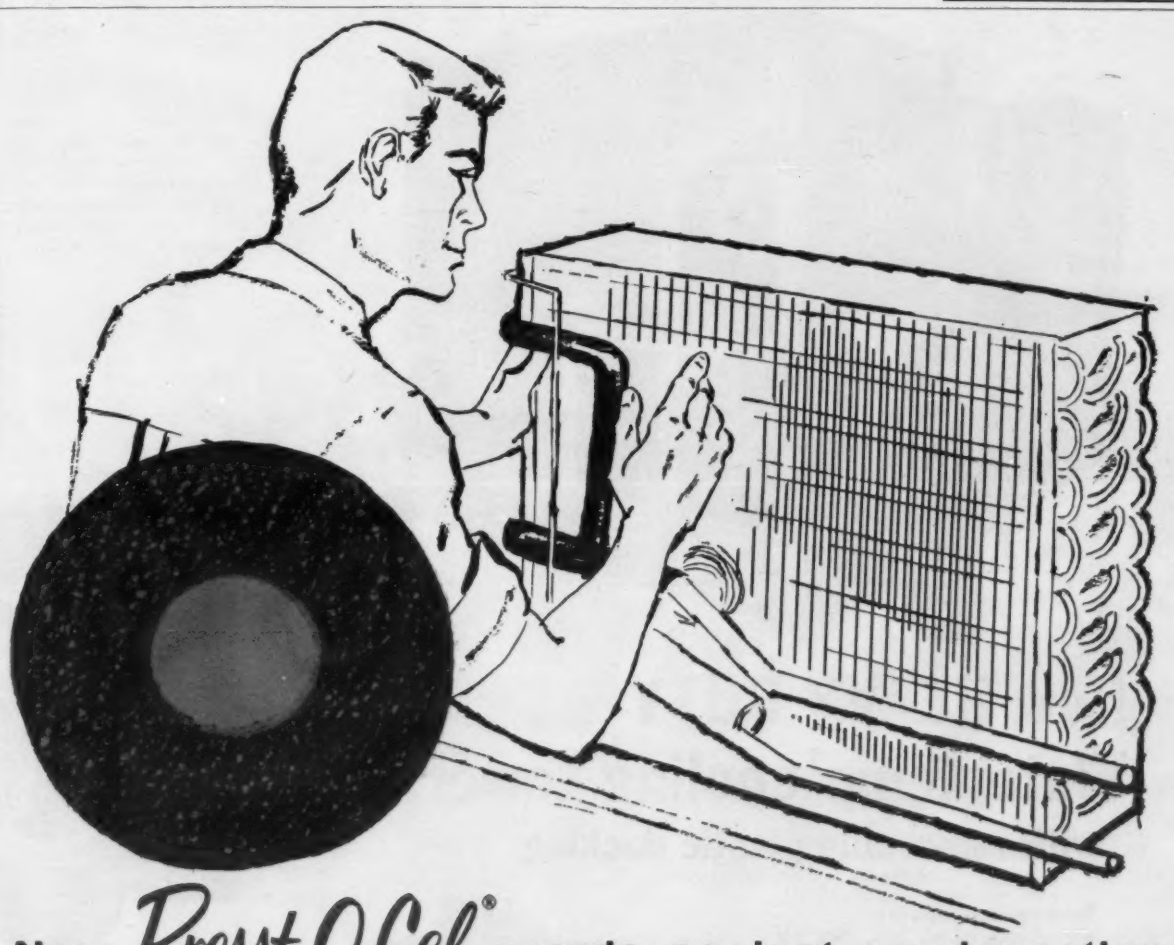
Circulating models feature Perfection's special floor level air distribution system.

All heaters including the expanded oil space heater line, ranging from 38,000 to 79,000 B.t.u.h., provide "advanced styling." Gas and oil wall heaters include directional louvers, the manufacturer points out.

Want More Details?

ADDITIONAL details on products that are described on these pages may be obtained by writing the manufacturer at the address given in each What's New story.

Tell him: "AH&RN sent me!"



New Presst-O-Cel® guards against condensation and "sweating"... insulates... provides vapor barrier

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Because it is so light and flexible, it makes an ideal material for covering tubes and pipes subjected to temperature or humidity conditions that might cause condensation or pose heat-loss problems—as on air conditioning and refrigeration lines.

In spite of its lightweightness and softness, PRESST-O-CEL offers long-life durability: it is water and air tight; resistant to oil, acid and alkali; self-extinguishing; will not support fungus; resists rodents and vermin and has a high insulation factor.

WRITE for more information on this amazing new product.
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Air-Cooled Condenser Room Design

Friedman Outlines 5 Rules To Help Make a Success of Even the First Machine Room Installation

ATLANTIC CITY, N. J.— Five rules for good air-cooled condenser room design were enumerated by Don E. Friedman, chief engineer of Hussmann Refrigerator Co., at the Refrigeration Service Engineers Society convention here recently.

They are:

1. Use large intake louvers that allow air to flow evenly to all units.

2. Baffle the air only enough so that it will not pass over the top of the upper units and around the end of the unit line-up.

3. Use tight-closing modulating motorized dampers in locations with below 25° F. weather.

4. Be sure damper and exhaust fan controls are properly located and properly set.

5. Do not skimp on exhaust fan capacity. Test actual air volume.

"If you follow these rules and use good judgment," Friedman told the service engineers, "I am sure you will be proud of even your first try at designing or installing an air-cooled machine room.

Friedman expanded considerably on these rules and showed slides to illustrate his points.

He noted that the principal objectives of air-cooled condenser room design are:

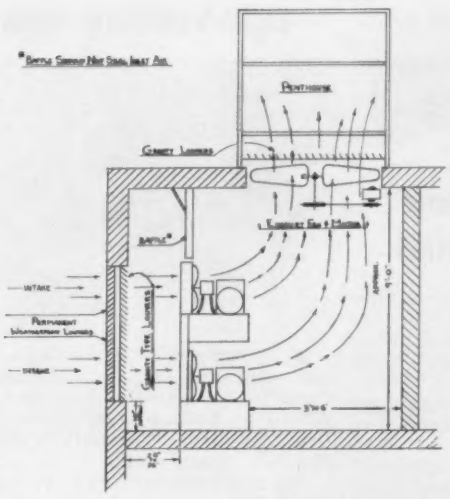
1. Adequate ventilation of all refrigeration units in summer.

2. Protection of units from cold winter temperatures.

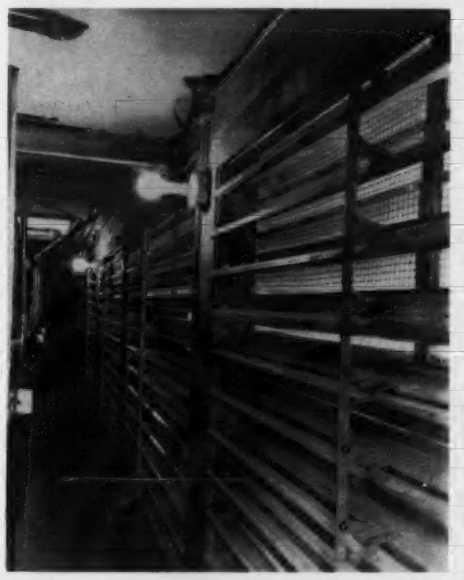
3. Automatic control system to maintain as near year-round optimum room temperatures as practical.

He suggested first that machine rooms be located on either the main floor or balcony of the markets and on an outside wall.

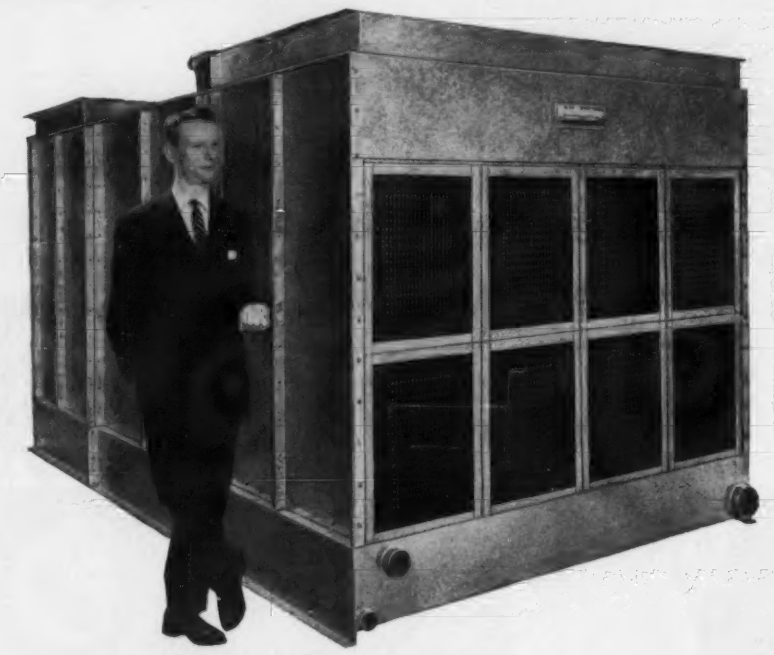
"When unit rooms are below ground level or not on an outside wall," he said, "experience shows that it is both expensive and extremely difficult to get



TYPICAL WELL-DESIGNED machine room showing in vertical cross-section intake louvers extending full length of condensing unit line-up, proper placement of condensing units and exhaust fans.



ADJUSTABLE MOTORIZED DAMPERS should be used on intake louvers where winter temperature falls below 25° F. so dampers will stay tightly closed under force of winter winds.



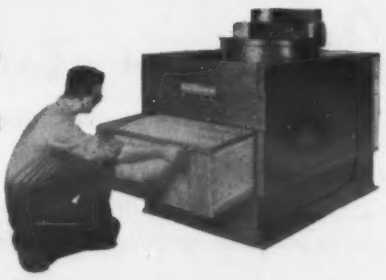
New HEAVY DUTY Watertemp® cooling towers with removable plastic decking

New cooling capacity
- available in 80, 100, 150, 200, 250 and 300 ton units

New assembly ease
- no nozzles or complicated header piping
- no cutting or fitting
- no painting required

New maintenance ease
- plastic decking slides out for fast, easy clean-up
- no maintenance painting

New tower life
- all sections hot-dipped galvanized after fabrication to leave no toe-hold for rust or corrosion attack.
- propeller fan is of alloy steel
- ball bearing weatherproof motor runs smoothly and gives trouble free performance



Watertemp cooling towers are also available in the 5 to 60 ton cooling ranges. Plastic decking slides out for cleaning and maintenance.

Send for free bulletins
For 80 to 300 ton capacity towers ask for Bulletin WT 508. For 5 to 60 tons, ask for our Bulletin WT 501.

0203

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CONTROL VALVES

CV-1 CV-2

A life time valve designed to operate all Watsco Line Tap, Can Tap and Line Port Valves. Quick coupled—No wrenches required. Single or double port valves are available.

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the proper amount of inlet air to all condensing units."

Intake louvers, he continued, should extend the full length of the condensing unit line-up so all units receive a sufficient supply of outside air.

Total area for inlet air louvers should be figured on a basis of 2½ sq. ft. for each horsepower of condensing unit.

Condensing Units Should Be Placed Side by Side

Condensing units should be placed side by side as closely as possible with their condensers located 24 to 36 in. from the outside wall to allow sufficient space for even air supply to all units.

From 3 to 6 ft. should be allowed in front of the units for work space and for mounting ceiling exhaust fans. Ceilings should be at least 9 ft. high so that even exhaust throughout the condensing unit line-up is obtained.

Fans should be sized to provide a total of 1,000 c.f.m. per hp. of condensing units if summer temperatures are frequently above 90° F.; or to provide 750 c.f.m. per hp. if temperatures are seldom 90° F. or above.

How To Be Sure You Are Getting Right Quantities of Air

To make sure that you are getting these quantities of air, Friedman pointed out, measure the net opening of each intake louver opening and multiply by the number of such openings. This gives the square feet of actual intake opening.

Then measure inlet velocity through the louver at several locations and average the readings.

"If we now multiply the average air velocity by the net opening we will have the actual amount of ventilation air," Friedman declared.

"For example, if we have four 48-in. louver sections with 15 openings of 2½ in. each, we will have

$$\frac{2.5}{12} \times \frac{48}{12} \times 15 \times 4 = 50 \text{ sq. ft.}$$

of opening. If average velocity is measured as 500 f.p.m., then our actual ventilation is $50 \times 500 = 25{,}000$ c.f.m."

Friedman suggested that the inner portion of the intake louver should be of the adjustable motorized damper type in areas with winter temperatures below 25° F. This will keep dampers tightly closed even under the force of winter winds. In milder temperatures, gravity type adjustable dampers are adequate.

Friedman declared that a baffle between the upper condensing unit and the ceiling is necessary to prevent short circuiting of the ventilation air. There should also be baffles at each end of the unit line-up between the units and the outside wall to prevent the air from bypassing the units.

However, space between units and between lower units and the floor should not be baffled or difficulty may be experienced in winter by not being able to recirculate heated condenser air to maintain proper condensing temperatures.

This will also prevent back drafts through the condensers in summer when exhaust fans may not be delivering as much air as the condenser fans require.

"Back drafts are understandable," he explained, "since they impose an excessive pressure head on the condenser fans as well as cause windmilling when condenser fans are off. This may cause loss of oil from the fan motor bearings.

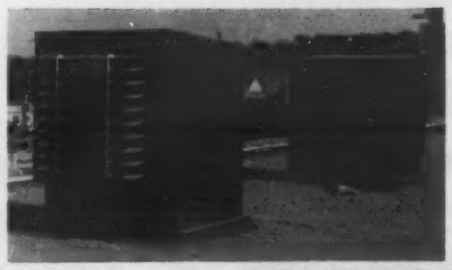
Friedman suggested a control system that would maintain the machine room as near 80° F. as practical the year around without excessive short cycling of the exhaust fans and motorized dampers.

Damper thermostat should be set to begin opening the dampers when temperature rises to 70° F. reaching full opening at 76° F.

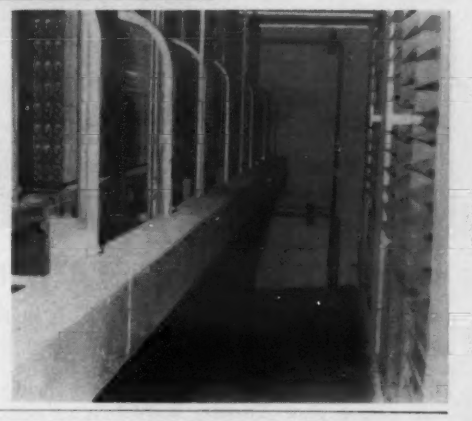
Exhaust fan thermostats (with alternate fans on one thermostat) would start one group of fans at 80° F. and the other group at 85° F.

Machine room temperature should be kept above 65° F. to prevent low condensing pressures that would cause erratic expansion valve operation.

"Experience shows that all thermostat bulbs should be grouped together on the inside wall near the center of the line-up, somewhere near eye level," Friedman asserted.



EXHAUST FANS and their dampers mounted on roof over a balcony type condensing unit installation.



LOOKING DOWN the machine line-up from one end of the space between the machines and outside wall.

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Airtemp Appoints Lawrence H. Baker Mgr. of Branch Sales

DAYTON — Vice President-Sales Joseph B. Ogden has announced the appointment of Lawrence H. Baker as manager of branch sales for Airtemp Div., Chrysler Corp.

L. H. Baker

Baker joined Airtemp in 1952 as a field engineer in the New York office. He became the Chicago sales engineer in 1953, moved to Miami as senior engineer in 1955, and then back to New York in 1956, as senior engineer in Applied Machinery and Systems.

A native New Yorker, Baker became that city's branch manager for Airtemp in 1958. Later he moved to Dayton as division manager of field sales, Applied Machinery and Systems Dept.

LARS HANSON, manager of the compressor department, Unitary Equipment Div. of Carrier Corp., displays on the right the new Micromite compressor, and on the left, the serviceable hermetic which it will replace in most Carrier air conditioning equipment. Both models give 4 tons' cooling capacity with air-cooled condensers and 5 tons with water-cooled.

Carrier's 'Micromite' Compressor--

(Concluded from page 1)

manager of its Unitary Equipment Div.

Showing the Micromite to NEWS editors, Carrier personnel emphasized several factors which make the new compressor "the ultimate in reciprocating compressor development for the air conditioning units used in residences and smaller commercial establishments—simpler in construction and more trouble free, higher in capacity, and lower in power consumption."

In spite of the greater r.p.m., piston and bearing speeds remain the same because piston strokes and bearing diameters have been reduced;

Multi-cylinder design provides smooth, even power not possible with single-cylinder units of the same capacities;

Almost complete elimination of threaded joints inside the compressor reduces the potential sources of leaks and mechanical failures. With the exception of a bolt which holds the hot gas line in place, there are no nuts and bolts or gaskets.

Electrical terminals are fused to compressor body; valve plate assembly is brazed, not bolted.

The Micromite has fewer parts than conventional welded hermetics of the same rating; the manufacturing and assembly operations on a semi-automated production line allow the use of less parts and the elimination of threaded joints. Induction heaters, for example, make possible the shrink fitting of the motor rotor on the crankshaft and the shrink fitting of the motor cap (which serves as a gas manifold) over the one-piece "uniblock" cylinder block. The uniblock is a cast crankcase construction in which the shaft and cylinder bores are perfectly aligned in a manner "not possible with two-piece bolted construction."

Sound level reduction is built into the crankcase housing by means of directed passageways which form an internal muffler chamber.

A unique, large area *S-spoke* suction valve of Swedish steel provides fast action with low pressure drop.

The Micromite compressors will be manufactured in cooling capacities from 1.2 to 4 tons with air-cooled condensing, Gray stated. Weights range from 67 to 100 lbs. The three smaller sizes of the compressor are two-cylinder models in a shell $8^{13}/_{16}$ in. in diameter; the larger units have three or four radial cylinders and fit in a $9^{13}/_{16}$-in. casing.

The new compressors have been in development for 10 years and have behind them the field testing of over 1,000 units during the last three years, the company stated. Investment in development work and tooling totaled more than $4 million.

Since the Micromite will replace existing bolted hermetic Carrier compressors in their size range, the NEWS asked the reason for adding the new line. "There are several reasons," a spokesman declared.

"People don't repair much under 5 tons any longer; they replace. Our smaller and lighter Micromite will make replacement much easier.

"Since Carrier has always been a leader in development, it is natural for us to introduce exclusive features as the 'Uniblock' construction and the large-area *S-spoke* suction valve and the assembly methods which eliminate nuts and bolts.

"Earlier forecasts predicted a greater market than developed in the residential and small commercial areas. We are convinced one reason for this is the desire on the part of the consumer for more B.t.u. per pound, per dollar, per size. The Micromite gives these improvements.

"Our distributors and dealers have helped us grow so we have had to expand, and we are able to time the addition of this new line to our other expansion."

Carrier has developed a color movie which presents the highlights of the new compressor and which tells of the development of compressors from the early days of air conditioning.

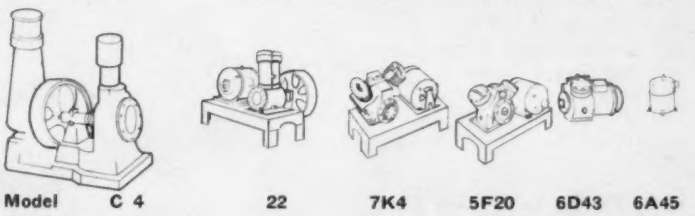
Several hand-assembled Micromites are being used to demonstrate the unique features of the new compressors to Carrier dealers and distributors about the country. Key point in the presentation is a chart showing the evolution of 5-ton compressors. (See chart above).

Specifically, the new compressor—Micromite model 6A series—will first be used on Carrier's 13,000 B.t.u. and 15,000 B.t.u. room units, models 51CA-130 and 51CA-150, respectively. All units containing the Micromite will be clearly labeled.

Carrier's model 6D series compressors will continue to be used in the larger sizes. In the sizes covered by the Micromite, the 6D series will continue to be used in heat pumps, low temperature applications, and as replacements for existing units.

DISPLAY OF COMPRESSOR PARTS includes laminated valve assembly, front left, with assembled valve just above it. Larger parts, left to right, are the motor cap which fits on top of the crankcase, center, which fits into the manifold, right. Grooved channels of crankcase act as a muffler to reduce noise level.

EVOLUTION OF 5 TON COMPRESSORS



	1900's	1930's	1939	1946	1949	1960
Model	C 4	22	7K4	5F20	6D43	6A45
Cubage (Ft.³)	124	71	18.4	12.5	2.5	1.4
Approx. Wt., Lbs.	4000	1070	500	423	198	94
Nominal R.p.m.	160	500	1500	1750	1750	3500

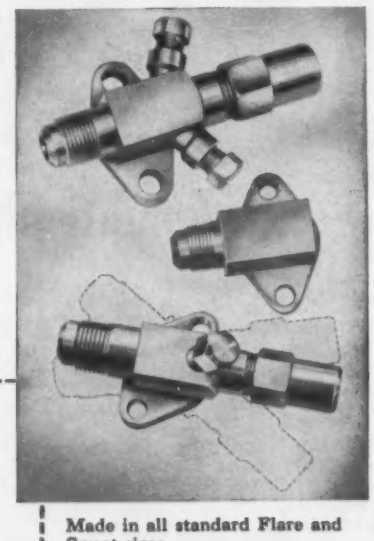
PRODUCT SERVICE SPECIALIST

Field engineer with experience in heating and air conditioning industry. Requires knowledge of application, sheet metal operation, dealer training in heating and air conditioning methods and techniques, product service organizing at distributor level. Position offers excellent opportunity. Must travel. Salary commensurate with experience. Send complete resume to General Electric Company, Room 1117, Merchandise Mart, Chicago, Illinois.

COMPRESSOR PAD VALVES and PAD FITTINGS

STATIONARY OR SWIVEL TYPE

Made in 3 sizes with 1⅛—1¾ and 2¼ Bolt Centers



Swivel Pad Valves may be set at an angle to correspond with tubing . . . Ideal for Automotive Air Conditioning Systems where space limitations exist.

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Single or double ¼" Flare or ⅛" Pipe Gage Connection.

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Other Primore Valves available: Base, Angle, Receiver, Rotalock, Breakaway.

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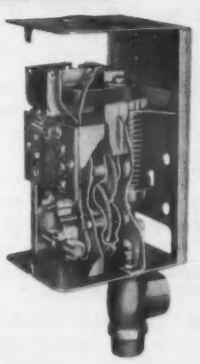
Motorized Zone Control Valve Features Completely Enclosed, Hermetically Sealed Silent Mercury Switches



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FREE....70 page design handbook on single and multi-zone hot water baseboard heating systems.

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"One of the nation's largest manufacturers of Residential and Commercial Boilers, Baseboard and Steel-Fin Radiation, Motorized Valves, Air-Cooled and Water-Cooled Condensers."

How to take advantage of the great air conditioning sales potential in . . .

1960

THE AIR CONDITIONING "SHOW CASE ISSUE" MARCH 7

As reported in a recent issue of the NEWS

"There seems to be every reason to believe that 1960 will see sales performances exceeding those of 1959 and perhaps establishing records for almost every kind of product that the industry sells!"

As the *only* Weekly Newspaper of the Industry, AIR CONDITIONING, HEATING & REFRIGERATION NEWS covers the important trends and happenings of this booming market every week.

The annual Air Conditioning "Show Case" Issue, however, takes an additional step in providing useful and useable information to its readers who comprise the top buying influences in this expanding market. Devoted entirely to the air conditioning market (residential, commercial, and industrial), this year-'round reference issue provides:

The industry's largest and most comprehensive detailed listings of comparative specifications on all major makes and models of packaged air conditioners;

The latest facts on merchandising and selling air conditioning equipment;

Valuable sales helps to make 1960 the best air conditioning sales year yet; and

Detailed market analysis, new air conditioning applications, tested sales methods and details from manufacturers about the features of their new lines!

Here is an issue that dealers, manufacturers, distributors, and contractors look forward to receiving, studying, and retaining for constant reference in their many buying decisions. Why not take immediate action to reserve enough space to tell your complete product story in the March 7 "Show Case" Issue. Any of the offices listed below will be pleased to provide complete details!

AIR CONDITIONING "SHOW CASE" ISSUE

PUBLISHED MARCH 7

CLOSING DATE FEBRUARY 24

AIR CONDITIONING HEATING & REFRIGERATION NEWS

Business News Publishing Co.

450 W. Fort St., Detroit 26, Mich.

NEW YORK	521 Fifth Ave., MUrray Hill 2-1928-9.
CHICAGO	134 S. LaSalle St., FRanklin 2-8643-4.
LOS ANGELES	4710 Crenshaw Blvd., AXminster 2-9501.
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You Asked About It

From the many requests for information it receives, the NEWS will select and publish some of general interest. In many instances, the answers will be supplied by authorities in the industry.

Q. Why or what causes the waterproofing or coating on the sump of a cooling tower to come off? We clean the tower often with Calgon condenser cleaner and with Virginia Liquid acid, both as recommended.

G. B. G.—Sioux Falls, S. D.

This is the type of question which drives chemists, cooling tower producers, and technical editors to distraction, because it gives no specifics, no case history. Remote diagnosis of a problem is difficult enough when particulars are supplied; it becomes almost impossible when the question is general, rather than specific. So the answer, too, must be general.

One cooling tower producer answers: We have used different coating systems for the cold water basins at different times. Prior to our present hot dip galvanizing, we supplied a heavy hot asphalt application over a baked epoxy enamel. Several years ago, we were using a bituminous mastic coating for the interior of the tower and the cold water basin. We know of no failure of the hot dip galvanized coating; we are aware of only one failure of the heavy hot asphalt coating; several failures of the bituminous mastic have been reported and, in most of these, corrosion had started in pinholes and progressed under the film.

We can only give a more specific answer if we are informed of what type of coating has failed and under what conditions.

WITT LOW TEMP.
Defrostair **COIL** WITH
EXCLUSIVE PATENTED
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DEFROSTS AUTOMATICALLY

FOR LOW TEMPERATURE ROOMS, FOOD STORAGE, FOOD FREEZING, ICE CREAM STORAGE, INDUSTRIAL LOW TEMP. APPLICATIONS.

Witt exclusive Defrostair patented Heat Trap coil requires only a low cost single pole, double throw time clock for complete automatic defrosting. Easy low cost installation. Requires no re-evaporation or special plumbing. Completely automatic. Available in 21 models ranging in BTU capacities from 1400 to 44,100 at 10°T.D. Write today for complete Witt Catalog.

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940 N. Sycamore Ave.,
Los Angeles 38, Calif.

Tech Center

Tech Center by Frank J. Versagi has been omitted from this issue. The series, which is currently discussing "Applied Electrical Theory," will resume in the next issue.

Vornado Names Viggiano National Sales Manager

NEWARK, N. J.—Louis Viggiano, former sales manager for Du Mont in New York and New Jersey, has been appointed national sales manager of Vornado, Inc.

Viggiano will direct distribution of all Vornado products.

For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

Only 25¢ each.

EXTRUDE RUBBER OVER METAL?

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Bus bars, flexible tubing, braided cable and hose, light structural members up to 4½" wide, 16 feet long. These are some of the parts over which Geauga applies an extruded cover. Material is applied as a continuous extrusion up to ⅛" thick.

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Wagner Electric Promotes Four

ST. LOUIS—Wagner Electric Corp. has announced the promotions of Harold N. Felton from vice president, sales to vice president, marketing and a director of the company, and Carl E. Widell from director of market expansion to assistant vice president, marketing.

H. N. Felton

C. E. Widell

Also announced were the promotions of Ralph W. Boeringer from industrial relations director to vice president, industrial relations, and Harold S. Garrett from assistant director of purchases to director of purchases.

Felton will be responsible for the over-all marketing activities of both the electrical and automotive divisions. Widell will work with Felton in planning and carrying out specific marketing programs. Boeringer will continue to direct all operations dealing with company personnel.

Pennsalt Provides Squaw Valley Promotion Packets

PHILADELPHIA — Pointing out that its "Isotron-12" was selected to help furnish the ice for skating events at the eighth Olympic Winter Games at Squaw Valley, Calif. Feb. 18-26, Pennsalt Chemicals Corp. reported that it provided 250 selected Isotron wholesalers with a sales promotion package to help them tie in with the contests.

The package consisted of a colorful folder, easel-back counter card, window streamer, and a reprint of an advertisement running concurrently in three leading trade publications.

Each of the promotion pieces featured the figure of a girl skater in picturesque Squaw Valley.

Henry D. Varming of Phoenix Dies at 44

PHOENIX, Ariz.—Henry D. Varming, 44, died suddenly here where he has lived the past three years. A refrigeration service employe for Valley Sheet Metal Co., he was a former resident of Chicago and Mundelein, Ill. and at that time was employed by Refrigeration Maintenance Corp.

Leonard O. Laurie Killed In Auto Collision

DECATUR, Ill.—Leonard O. Laurie, 38, production superintendent of the York Div., Borg-Warner Corp., was killed recently when his car and another collided on South Side Dr.

According to city policy, the accident occured as Laurie was backing his car out of a driveway at the plant.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

SERVICE AND installation mechanic 20 years' experience. With last employer 10 years. Wishes to relocate with company that can offer year around work. Can handle refrigeration, heating and air conditioning. BOX A6454, Air Conditioning, Heating & Refrigeration News.

AIR CONDITIONING engineer. Experienced in sale and application of packaged units, air handling and fan coil units, packaged water chillers and coils. Registered P.E. Desires responsible position with manufacturer or distributor. Will relocate. Write BOX A6462, Air Conditioning, Heating & Refrigeration News.

FIELD SERVICE Engineer—Broad industry background including dealer, ownership, distributor and factory experience. Enviable reputation in service diagnosis, customer relations, wholesale parts sales, organizational work and exceptional service and sales training ability. Energetic, intelligent, healthy, free to travel and relocate. Can furnish best of references. BOX A6467, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

ICE VENDING stations, icemakers, drinkmakers. Several territories available to experienced agents with proven record for establishing and giving sales training to commercial refrigeration distributors. Our complete sales program will require a major portion your time. Telephone DANSBY A. COUNCIL, Sunset 20314, Fort Smith, Arkansas.

ASSISTANT MANAGER, Export Department. Requirements include: technical background; experience with air conditioning, refrigeration and heating products; knowledge of export operations. Opportunity unlimited with rapidly expanding export department of industry's leading multi-line manufacturer. Send complete resume to DUNHAM-BUSH, INC., 179 South St., West Hartford, Conn.

MANUFACTURERS REPRESENTATIVES and distributors to sell air conditioning and refrigeration jobbers and dealers. Complete line of quick scale removing materials and water treating chemicals. Lowest delivered prices in the industry. New polyethylene packages. Proven line. RATHBUN COMPANY, P. O. Box 5291, Houston 12, Texas.

MANUFACTURERS' REPRESENTATIVES for nationally accepted line of commercial roof-mounted heating and cooling units for Arkansas, North Carolina, Virginia, West Virginia, greater Pittsburgh, New Mexico, Arizona, Utah, Nevada, and west Texas. Write: BOX A6443, Air Conditioning, Heating & Refrigeration News.

WANTED: ALIVE!!!! For: Hard work. Reward: Excellent commissions. Manufacturer's representatives . . . by nationally known manufacturer with 50 years' experience manufacturing commercial refrigeration, air conditioning and heating coils selling to wholesalers and OEM accounts, etc. Territories open are Ohio, Indiana, Kentucky, and Tennessee. Also Kansas, Oklahoma, Missouri, Nebraska, and Iowa. Send details and experience of territory covered. BOX A6457, Air Conditioning, Heating & Refrigeration News.

SALES REPRESENTATIVES — Brokers — Commercial refrigeration manufacturer now offering protected territories to qualified sales representatives who are now calling on refrigeration dealers and jobbers in the commercial, restaurant, dairy, hotel, and bar supply fields. Line features cold water coolers, slant-lid bottle coolers, ice cube makers, milk and dairy merchandising cabinets, all-purpose display cases, wall cases, ice cream cabinets, etc. Please advise lines now selling and territory covered. All inquiries in confidence. Reply to: BOX A6460, Air Conditioning, Heating & Refrigeration News.

PRODUCT DEVELOPMENT Engineer (Air Conditioning) — National multi-plant manufacturer requires graduate Mechanical Engineer for management position in product development. Qualifications should include a degree from an accredited engineering school, a minimum of ten years' experience in the engineering of air conditioning systems and the design of equipment. Should have experience in factory fabrication of sheet metal, and the details of electrical and control systems as contained in air conditioning units. Salary range is in five figures commensurate with the position and applicant's qualifications. BOX A6461, Air Conditioning, Heating & Refrigeration News.

MANUFACTURER'S REPRESENTATIVE for manufacturer of heating, air conditioning, refrigeration coils and air handling equipment. Must have contact with mechanical contractors in southern New Jersey, eastern Pennsylvania, Delaware, Baltimore and Washington, D. C. Write: BOX A6463, Air Conditioning, Heating & Refrigeration News.

WANTED: AIR conditioning service representative by national manufacturer to cover dealers through Chicago region—residential and small commercial products. Must be good technician with ability to instruct dealers. Salary and travel expense plus benefits. Reply giving complete resume to: BOX A6468, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT WANTED

WANTED — USED ice cube machines. Any quantity. Prefer 200 lb. and 400 lb. machines. Must be complete, but do not have to be operative. Write stating make, models, condition and price F.O.B. your city. BEST EQUIPMENT CORP., 614 Quintana Place, N.W., Washington 11, D. C.

EQUIPMENT FOR SALE

CHILLED AND hot water or direct expansion extended surface coils:
5 T.-4R—4 sq.ft. face area $117.00;
7.5 T.-4R—6 sq.ft. face area $149.00;
10 T.-4R—8 sq.ft. face area $181.00;
15 T.-4R—12 sq.ft. face area $245.00;
20 T.-4R—16 sq.ft. face area $310.00;
25 T.-4R—20 sq.ft. face area $375.00;
30 T.-4R—24 sq.ft. face area $440.00;
Capacity based upon 45°R.T. & 67°E.A. w.b. 500 fpm coil face velocity. Wire * write * call for quotations for any coil requirements, ARCTICAIRE MFG. CO., 2201 Grand Ave., Tel. BA. 1-7055, Kansas City 8, Mo.

DEALERS, DISTRIBUTORS, agents—Remote air cooled - air conditioning. Heat pumps that defrost without reversing without loss of efficiency (patent applied for). High quality, competitive pricing. Some territory in North, East, and far West open—dealers anywhere. NATIONAL THERMATIC CORPORATION, Division of JOHN FELTER COMPANY, P. O. Box 7464, Houston, Texas.

PARTS KITS available now for all Tecumseh hermetic compressors, ⅛ through 5 h.p. All fractional horsepower kits available after June 1st. Kits contain terminal assembly, valves, gaskets, internal mounts. Rod not included but available. Many distributor territories open. Contact — DAVID B. RUTHSTROM, 801 Rosine, Houston, Texas. Phone: JA 6-4028.

ATTENTION REFRIGERATION Servicemen: Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

OPPORTUNITY IN long established going air conditioning, refrigeration contracting, sales & service business for investment with services or complete ownership. Located in Southern California. Qualified inquiries will receive full information. Reply: BOX A6465, Air Conditioning, Heating & Refrigeration News.

WELL ESTABLISHED New York City air conditioning and refrigeration mechanical contractor — industrial and commercial — desires partner to buy one-half interest. Field working knowledge and good sales ability necessary. Investment five figures. Write: BOX A6466, Air Conditioning, Heating & Refrigeration News.

THE MASTER SERVICE MANUALS - - -

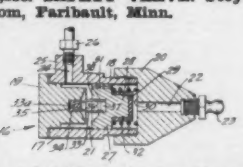
— — — and other books of the Refrigeration Library are depended upon as textbooks in trade schools from coast to coast.

BUSINESS NEWS PUBLISHING CO., DETROIT

PATENTS

Week of Sept. 29

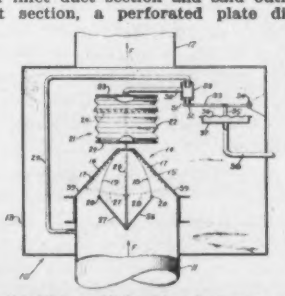
2,906,286. SAFETY VALVE. Floyd C. Hanscom, Faribault, Minn.



1. A fluid flow shut-off valve applicable into a flow line, said valve comprising a body structure defining an elongated interior chamber with a forward end communicating with an outlet, and a rear end communicating with an inlet, a valve seat surrounding the outlet, a valve element spaced from the valve seat and longitudinally movable through a first distance in the chamber into sealing engagement with the valve seat. . . .

2,906,287. FLOW CONTROL DEVICE. Joseph W. Kreuttner, North Tarrytown, N. Y., assignor to Buensod-Stacey, Inc., New York, N. Y.

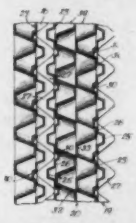
1. In a device for controlling fluid flow from at least one inlet duct section into an outlet duct section; the combination including a housing for establishing communication between said inlet duct section and said outlet duct section, a perforated plate disposed within said housing between said inlet and outlet duct sections, at least one flexible, substantially imperforate curtain suspended at the upstream side of said plate and movable from a normal position. . . .



2,906,460. SNAP ACTING CONTROL APPARATUS. James U. Daly, Latrobe, Pa., assignor to Robertshaw-Fulton Controls Co., Greensburg, Pa.

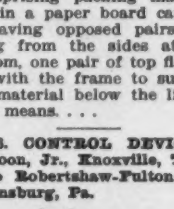
1. In a control device, the combination comprising a casing having a passage therethrough for fluid, a valve seat associated with said passage, a valve member movable between open and closed positions relative to said seat for controlling the flow of fluid through said passage, said valve member being positioned upstream of said seat and biased by fluid pressure toward engagement with said seat, means responsive to a condition to be controlled including an element movable in response to a change in said condition. . . .

2,906,508. CORE FOR HEAT EXCHANGE UNIT. Arnstead G. Getz Lakewood, Ohio, assignor to The Bishop & Babcock Mfg. Co., Cleveland, Ohio.



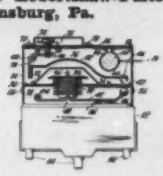
1. In a cellular core for heat exchange units, a plurality of sections respectively comprising two spaced apart substantially parallel sheet metal water walls and a sheet metal separator between said water walls substantially parallel therewith, said water walls having at the inner sides thereof flat transverse lands substantially straight lengthwise and of substantially uniform width each provided with a plurality of protuberances spaced apart lengthwise thereof and extending inwardly of said section. . . .

2,906,512. COOLING TOWERS. George W. Meek, Pelham, N. Y., assignor to Carl Munters & Co., Danderydsvagen, Stockholm, Sweden.



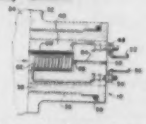
1. A cooling tower comprising a skeleton frame, a sump tank mounted on the frame, liquid distributing means supported on the frame as above the base, a gas and liquid contact packing unit between the liquid distributing means and sump tank, said packing unit comprising packing material assembled in a paper board carton, said carton having opposed pairs of flaps extending from the sides at the top and bottom, one pair of top flaps interlocking with the frame to support the packing material below the liquid distributing means. . . .

2,906,846. CONTROL DEVICE. Jack Witherspoon, Jr., Knoxville, Tenn., assignor to Robertshaw-Fulton Controls Co., Greensburg, Pa.



5. In a control device, the combination comprising a housing, a control switch carried by said housing and being operable in a first position to control a main heater and in a second position to control an auxiliary heater, an apertured baffle plate in said housing dividing the same into a bimetal compartment and a bellows compartment, an actuator for said switch disposed in said bellows compartment and having one end pivotally mounted and a movable end, a bellows disposed in said bellows compartment and being expansible and contractible in response to remote temperature variations influenced by the main heater. . . .

2,906,949. TEMPERATURE RESPONSIVE PNEUMATIC CONTROL ORIFICE MEANS. Raymond W. Jensen, Phoenix, and Harry E. Etches, Mesa, Ariz., assignors to The Garrett Corp., Los Angeles, Calif.



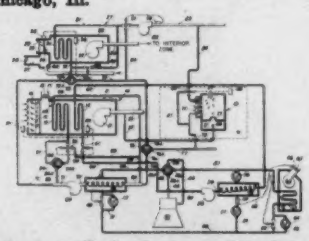
1. In a temperature responsive control orifice the combination of: means forming a restricted tubular passage having inlet and outlet ends; and an electrical heating element disposed to heat fluid in the proximity of said restricted passage means, the thermal expansion of the fluid serving to increase the volume and reduce the density and weight flow of the fluid passing through said restricted passage, said heating element being a coil disposed adjacent the inlet of said restricted passage means.

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Address orders to: Commissioner of Patents, Washington 25, D. C.

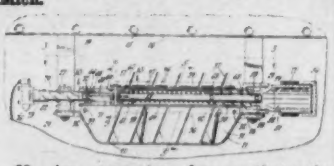
Week of Oct. 6

2,907,178. AIR CONDITIONING SYSTEMS. Ralph D. McNatt, Columbus, Ohio, assignor to Borg-Warner Corp., Chicago, Ill.



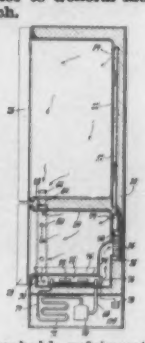
1. A method of air conditioning a multi-room building having an interior and exterior zone comprising the steps of: conditioning primary air to compensate for the heat transmission load of said exterior zone rooms; delivering said primary air to said exterior zone rooms; supplying a heat-exchange fluid to said exterior zone rooms for heat-exchange with room air to counteract internal heat gains; conditioning outside air to compensate for internal heat gains within said interior zone rooms. . . .

2,907,179. ICE MAKING APPARATUS. Arthur J. Frei, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich.



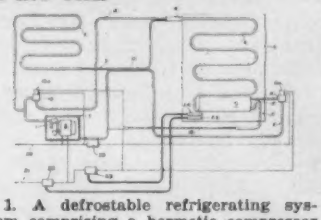
20. An apparatus for continuously making ice comprising, a freezing device including a tray member, a grid member disposed in said tray member having walls dividing ice frozen therein into separated ice blocks and a single motor associated with the device provided with a freezable liquid confined therein for operating same, one of said members being mounted for rotation with respect to the other of said members. . . .

2,907,180. REFRIGERATING APPARATUS HAVING AIR CONTROL MEANS FOR MULTIPLE COMPARTMENTS. Leonard J. Mann, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich.



8. A household refrigerator including an insulated cabinet containing an unfrozen food compartment and a frozen food compartment insulated from each other, one of said compartments having an enclosing wall, a single evaporating means associated and in cooling relation with an enclosing wall portion of one of said compartments for cooling the unfrozen food compartment at above freezing temperatures and for cooling the frozen food compartment at below freezing temperatures. . . .

2,907,181. HOT GAS DEFROSTING REFRIGERATING SYSTEM. Clyde J. Nonomaque, Louisville, Ky., assignor to General Electric Co., a corporation of New York.



1. A defrostable refrigerating system comprising a hermetic compressor unit including a compressor and a motor for driving said compressor enclosed within a sealed casing, a condenser, a capillary flow restrictor, an evaporator and an accumulator, conduit means including a suction line between the upper portion of said accumulator and said casing for connecting said compressor, condenser, capillary flow restrictor. . . .

(To Be Continued)

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DIVISION OF HAGAN CHEMICALS & CONTROLS, INC.

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N. Y. Probe--

(Concluded from Page 1, Col. 4)

require the licensing of fuel oil dealers, salesmen, and drivers.

The measure is intended to prevent a repetition of recent incidents in which Dept. of Markets inspectors allegedly accepted bribes from dishonest dealers to permit them to cheat consumers on fuel oil deliveries.

According to Edward S. Silver, Kings County District Attorney, the alleged fraud has cost Brooklyn residents $5,000,000 to $15,000,000 a year more in heating bills. He said air was pumped along with fuel into home tanks so that customers received 5 to 10% less oil than they paid for.

Twenty fuel oil dealers were under investigation in Brooklyn as were others in the Bronx and Queens and in Nassau County. Six Brooklyn dealers were indicted recently. They pleaded not guilty to indictments charging them with giving bribes totaling $7,550 to two city inspectors from 1956 to 1959.

The inspectors, who resigned from the Bureau of Weights & Measures, have been granted immunity because they are cooperating with Silver, it was reported. The alleged payoffs were to prevent inspection reports on meters that measured fuel oil deliveries. Silver said drivers and other employes were also involved.

2 BOOKKEEPERS TESTIFY

In Brooklyn last Tuesday, two bookkeepers employed by fuel oil dealers testified before the rackets grand jury. A third asked immunity from prosecution. Four tank truck drivers who were scheduled to testify obtained delays to permit them to confer with attorneys.

The Bronx grand jury for February is conducting its inquiry into the short-measuring practices.

In a related development, Mayor Wagner ordered city commissioners to have confidential aides make special investigations where needed. This was one of several steps aimed at bringing about a uniform program to prevent corruption in the inspection services of 15 city departments.

The program was worked out by the department heads in a series of conferences held at the mayor's direction. The conferences were an outgrowth of the disclosures of corruption in the inspection services of the Dept. of Markets affecting fuel oil deliveries and meat sales.

Mayor Wagner also ordered that all city inspectors be required to file periodically with their agency heads financial statements detailing their net worth.

Project Engineer

Midwest Household Refrigeration Manufacturer has opening for Project Engineer. Should have at least three (3) years actual engineering experience in this field.

Must have B.S. degree in either Mechanical Engineering or Electrical Engineering

BOX A6464, Air Conditioning, Heating & Refrigeration News.

To Overlook Violations

Plumbing Inspectors Taking Bribes, 2 Chicago Contractors Charge

CHICAGO — Investigations have been launched into charges that city plumbing inspectors accepted bribes to overlook building code violations.

Initial charges were made by two plumbing contractors a year ago in Building court. The charges of Gerald Santowski and Joseph Miller, partners in Santow Plumbing & Heating Co., were repeated recently in the same court.

Last week, the two contractors reportedly gave a grand jury details of their charges, including dates, names, and places in the alleged payoffs. It was reported that they named at least six inspectors they had charged took money to approve work or get permits.

According to city Building Commissioner George L. Ramsey, the inspectors have denied accepting bribes. It was expected they would be called before the grand jury this week. Ramsey was expected to be called before the jury, too.

Earlier, Santowski and Miller offered to take lie detector tests to support their charges that plumbing and other contractors can't stay in business unless they pay bribes to inspectors.

As the county grand jury began its probe of the contractors' charges, Ald. Leon M. Despres urged that a thorough investigation be made of the building department.

In another development, Mayor Daly made public the ninth list, containing 58 buildings, where violations of building and fire codes had been found by task force teams of city fire, health, and building department inspectors.

After questioning a number of plumbing inspectors early last week, Ramsey said all denied any wrongdoing. He was sharply critical of Santowski and Miller, it was reported. He said he found they had neglected to obtain proper permits on many jobs.

The two contractors reportedly admitted they worked whenever possible without permits because they said a permit was a notification to building inspectors "to show up and demand payoffs."

Other complaints by owners of buildings were being investigated by the grand jury and Ramsey, according to reports.

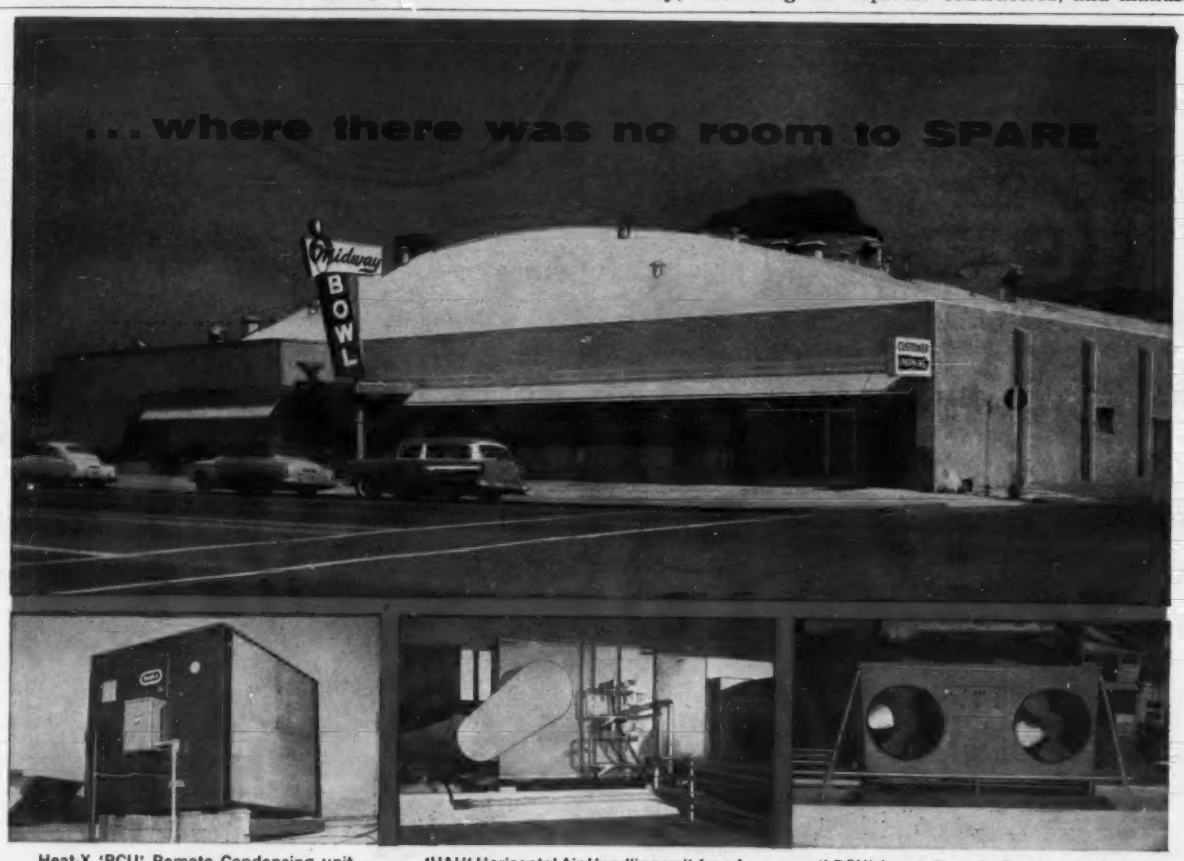
Typhoon Policy--

(Concluded from Page 1, Col. 2)

15 tons. The warranty is optional for units of 20, 25, and 30 tons' capacity. A five-year warranty is not available for 50, 60, and 75-ton Typhoon units.

"Our new policy will enable installing contractors to provide customers with adequate protection without creating sticky problems about who pays for what," Porzio said. "The new warranty makes clear the limits of responsibility and will enable the contractor to bill his customer for legitimate work done after installation without apology or explanation.

"The new policy is one that our distributor organization has sought and we believe it will go a long way toward eliminating the only thing that causes major difficulties among customers, contractors, and manufacturer."



Heat-X 'RCU' Remote Condensing unit (used with 'CC' unit) for coffee shop and offices.

'HAH' Horizontal Air Handling unit (used with 'LRCU') mounted on roof, air conditions bowling area.

'LRCU' Large Remote Condensing Unit (used with 'HAH') serves bowling area.

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'CC' Comfort Conditioner in office area (used with 'RCU').

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